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HAEMATOBLASTS AND BLOOD PLATELETS.*

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ALTHOUGH many studies and publications have been made during the last twenty years on the morphological elements of the blood, we have not yet reached an understanding of the significance of certain form-elements, known as the "third corpuscles."

In my studies of human blood, extending over several years, I have reached certain conclusions which I wish to bring before this Society.

The reason why so much discrepancy of opinions on certain points prevails among observers is two-fold: First, the structure of the red blood corpuscles is not agreed upon by the majority of microscopists, and second, under the term the "third element," both hæmatoblasts and blood platelets have been included by most authors who have written on the subject.

During the last two years I have laid before you observations which I think go far to prove the correctness of Elsberg's assertion, made in 1879, that the structure of the red blood corpuscle is reticular, the same as that of the colorless blood corpuscle, the difference being, that in the former the meshes of the reticulum are filled with a chemically complicated substance, generally termed "hæmoglobin;" whereas, in the latter, the meshes hold a colorless nitrogenous liquid, the "paraplasma" of French microscopists. It seems to me that no understanding of the so-called "third element" is possible, unless we admit the reticular structure of the red blood corpuscles. As to the second point, it will be the topic of the present paper. I will state in advance that the hæmatoblasts and the blood platelets are not identical formations, but of widely different origin and significance.

As to the method of investigation, I wish to emphasize, as I have done in previous years, that reliable observations are possible only when we take the blood directly from the blood vessels and immediately transfer it to a moist chamber and under the microscope. I need not again describe how to prepare specimens, but I will add that I lay emphasis upon the size of the droplet of blood to be taken, as well as the rapidity of transferring it to the slide. The size of the droplet should be at least as large as a medium sized pin's head. Such an one will spread uniformly under a three-quarter inch cover glass, whose margins have beforehand been oiled. Smaller drops do not spread so evenly, and the thin places are apt to dry up under the influence of the air inclosed under the cover.

No time should be wasted in squeezing out a droplet too small from too slight a wound with the needle. A few seconds' delay will suffice to cause crenation of the majority of red blood corpuscles, even though in summer heat, whereas the contour will be almost uniformly smooth if there is no delay in removing the blood into the moist chamber of the slide.

I object to the addition of any reagent, such as a solution of osmic acid, Pacini's preserving liquid, or even a solution of table salt. They all quickly alter the appearance of the blood, and lead to misconceptions.

Nothing but the serum of the blood should be allowed to bathe the blood corpuscles. In it, as I have shown in a previous paper, they may be preserved for several days.

I.—HÆMATOBLASTS.

Hæmatoblasts are shining or lustrous, homogenous globules or disks, of a marked yellow color, measuring one-fifth and three-fifths micromillimeters in diameter up to nearly the size of fully developed red blood corpuscles. They are juvenile forms of the red corpuscles present in large numbers in the blood of the newly born, and in small numbers in the blood of healthy adults. I have seen them in small numbers in a healthy man of sixty-three years of age. They are invariably augmented in number whenever there has occurred a considerable hemorrhage, or after frequent slight hemorrhages. We see them with great regularity in urine holding red blood corpuscles to a varying number, due to hemorrhages induced by tumors of the bladder, especially benign papilloma, or hemorrhages from the pelves of the kidneys, due to so-called renal calculi. Their number varies according to the severity and frequency of the hemorrhages. They have nothing to do with wasting diseases, such as tuberculosis, cancer, syphilis, etc. Neither are they augmented in numbers in chlorosis.

This, I think, goes far to prove that hæmatoblasts are juvenile forms of red blood corpuscles, and their more characteristic feature is their yellowish color, due to the presence of hæmoglobin, even in the earliest recognizable stages, when they do not exceed in size a granule. I have stated before that hæmatoblasts are homogeneous and apparently structureless. This is true only of the smallest forms. As soon as they have reached the size of about three micromillimeters under a magnifying power of 1,000 to 1,200 diameters, we recognize in them an extremely narrow and faint recticular structure, especially after their exposure to a solution of one-fifth of one per cent. of chromic acid or a forty to

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fifty per cent. saturated solution of bichromate potash. The latter brings forth distinctly the reticular structure of fully developed red blood corpuscles.

The smallest hæmatoblasts under the influence of these solutions, are either unchanged or exhibit a small central or eccentric vacuole, whereby they are rendered ring-shaped.

Hæmatoblasts up to half the diameter of a red blood corpuscle resist, at least for some time, a solution of glacial acetic acid with equal parts of water. They retain both a yellow tint and a smooth contour, whereas fully developed red blood corpuscles by this reagent are either rendered flat, much enlarged, crenated into many shapes, or broken up, as will be described later.

The smallest hæmatoblasts always retain a smooth surface, even though the red blood corpuscles in the same specimen have become crenated all over. When the hæmatoblasts have reached about half the size of fully developed red blood corpuscles, they assume a finely crenated surface, the crenations appearing like extremely delicate, almost invisible, needle-shaped projections from their margins, and not blunt or knob-like, as are those of fully developed red blood corpuscles.

As to their origin, I shall not make positive statements for the present. I am sure, however, that the formerly received opinion as to the origin of red blood corpuscles from the colorless blood corpuscles is erroneous.

Hæmatoblasts are formed in the tissues of the embryo or the fœtus, whenever one type of connective tissue changes into another; for example, cartilage into bone. Hæmatoblasts are formed, whenever in the process of development of the tissues, new blood vessels arise. They are formed in the adult in all lymph-structures, mainly in the lymph ganglia, and in the spleen, throughout life. The older a person grows, the less of lymphatic structures are present in the organism, hence, hæmatoblasts are found only in small numbers in the blood of very aged people.

Final statements as to the origin of hæmatoblasts I will postpone until I have finished some studies of the area vasculosa of the embryo of the chicken.

Hæmatoblasts are granules or isolated lumps of living matter not yet of the size of a red blood corpuscle. They are early forms of red blood corpuscles and develop into such. They are homogeneous if small, the size of granules, say, 1.5 micromillimeters in diameter, and the more distinctly reticular in structure the nearer they reach the size of the red blood corpuscles. They are from the very beginning saturated with hæmoglobin.

Most writers quote Hayem as the discoverer of these bodies. This is erroneous, for neither the name "hæmatoblast" nor an accurate description thereof can be credited to him. "Fosters' Medical Dictionary" is, so far as I know, the only work mentioning C. Heitzmann as the originator of the name. [See Art. "Hæmatoblast" in that work.] He defines hæmatoblasts correctly when he says that they are miniature red blood corpuscles. This term is applied to small colorless, circular or ovoid bodies, $1\frac{1}{3}$ to $1\frac{1}{6}$ the size of red blood corpuscles, circulating in the blood of mammals. It is, according to Foster, probably identical with the hæmatoblast of Hayem and the blood plate of Osler. This is an error, the same one Hayem himself made when describing the hæmatoblast in 1877.

Heitzmann [Studien an Knochen und Knorpel: "Medicinische Jahrbucher," 1872], described the changes occurring in the hyaline cartilage, preceeding the formation of bone tissue. At the border of the hyaline cartilage he found isolated lumps of living matter of high refraction, of a yellowish color, evidently arising from cartilage corpuscles. He says: "As the shining solid corpuscles exhibited stages of development advancing to the formation of nearly perfect red blood corpuscles, I considered them to be juvenile forms of the latter, and proposed for their designation the term hæmatoblast. I concluded, that a part of the cartilage corpuscle, or a portion of the body of such corpuscle, had become transformed into hæmatoblasts."

His statements are illustrated, and have been corroborated by Kassowitz and others. In 1873 another paper appeared by this author, in which the new formation of blood vessels is described in the process of transformation of cartilaginous into bone tissue, likewise with numerous illustrations, in which the hæmatoblasts are seen lying in vacuoles of elongated formations of living matter in the future blood vessels. He claims that both blood corpuscles and blood vessels originate simultaneously; the former from isolated lumps of living matter, which he termed hæmatoblasts; the latter from elongated tracts of living matter hollowed out by vacuolation, and the accumulation of a liquid in which the hæmatoblasts are suspended. From this it is evident that Heitmann was the discoverer of hæmatoblasts, the first to correctly describe them and the first to give them a name.

In 1877 G. Hayem presented to the Academy of Sciences, Paris, in succession, with only brief intervals of time, four papers published in the "Comptes Rendues," Vol. 84, which relate to the red blood corpuscles. In the first paper he speaks of the anatomical features of the blood of the newly born. He states that the sizes of the corpuscles are more varied than in the blood of the adult. In the second paper he discusses the nature and significance of the small blood corpuscles. He contradicts a prevalent opinion that these corpuscles indicate a retrograde change, or atrophy; on the contrary, he concludes, from the number of facts which he has observed in convalescent persons after acute wasting diseases, in anæmia, in menstruation, etc., that these small elements which he terms dwarfed corpuscles are young red blood corpuscles incompletely developed.

In the third paper, upon the development of the red blood corpuscles of the blood of oviparous vertebrates, he says: "The blood of oviparous vertebrates constantly holds colorless cells differing essentially from white blood corpuscles. These elements in progressive development become per-

fect red blood corpuscles, and for this reason he proposes to call them by the name of "hæmatoblasts."

In the fourth paper, upon the development of the red blood corpuscles in the blood of the higher animals, *i. e.*, viviparous vertebrates, he states that the hæmatoblasts in the blood of men and viviparous vertebrates are very small, delicate, slightly refracting elements of a contour almost invisible, with a diameter of 1.5 to 3 micromillimeters. Immediately after the removal of the blood from the blood vessels the hæmatoblasts become thorny and are apt to form groups or clusters, which latter feature is less pronounced in the blood of man than in certain animals. They play an important part in the formation of fibrin.

In his conclusion he states that the red blood corpuscles arise from more or less regular small elements, which are colorless, delicate, and quickly changed or modified as soon as removed from the blood vessels of living creatures.

From the description of Hayem it plainly follows that he designated as hæmatoblasts two form elements which I hope to show are entirely distinct.

II. BLOOD PLATELETS.

The first to see in fresh blood granules, granular masses or plaques, was Max Schultze. ("Archiv fur Mikroscopische Anatomie." Vol. I. p. 38, 1861.) Instead of the word plaque, I adopt the name platelet, it being the diminutive for plate, and identical with the French plaque.

Blood platelets are colorless lumps of living matter, varying in size from those just visible up to the size of about ½ the diameter of a red blood corpuscle.

The smallest granules, as seen under good immersion lenses, are apparently homogenous or structureless. The larger the granules are, the more we are able to see in them an extremely delicate, faintly pronounced reticular structure. When small, they present a peculiar greenish, shining appearance, characteristic of all granules of living matter.

They lack the yellowish tint seen in the hæmatoblasts. Small granules are nearly uniform in their diameter, are often slightly angular, *i. e.*, provided with from two to four conical projections. The more these granules swell, owing to their taking in of liquid from the surrounding plasma of blood, the more they assume a grayish color, a discoid shape, a smooth contour, and a faint reticular structure.

The easiest way to produce platelets is to treat the blood corpuscles with glacial acetic acid, diluted with equal parts of water.

For this purpose a droplet of the solution of the acid is placed upon the skin, preferably of the palmar surface of the thumb of the left hand. It is pricked directly through this droplet. Both the blood secured and the acetic acid are at once transferred to the slide and quickly covered with a thin cover glass, always, of course, oiled, as already described. In my own blood, platelets are extremely scanty. As soon, however, as acetic acid is mixed with it, hundreds of them appear, of all sizes, from the minutest granules ud to the half size of a red blood corpuscle, the smallest being slightly angular, glossy, and of a greenish refraction; the larger pale gray, smooth, discoid, and faintly reticulated.

Influenced by the preparation of acetic acid, the red blood corpuscles will in a few minutes become enlarged to nearly three times their original size, much flattened, and deprived of coloring matter.

The experiment I have here described was first made by Norris, of England (See under word "Hæmatoblast," "Foster's Medical Dictionary"), who thought he had thus discovered a new element in the blood, and proposed for it the awkward name: "Invisible corpuscles of the blood." He evidently did not take into account the fact that the platelets were artificial products, caused by the breaking up of the blood corpuscles under the influence of acetic acid. Norris' experiment is valuable, however, inasmuch as it shows us how to produce them in large numbers in a short time.

The question now arises, What are the platelets? I may state that, without doubt, they are products of the red blood corpuscles, caused by their disintegration into fragments of varying sizes.

My reasons for this statement are the following:

1. In specimens of fresh blood transferred at once to the microscope I have occasionally seen, when the red blood corpuscles were distinctly crenated, knobs hanging upon the corpuscles by means of a slender pedicle. These knobs, after the pedicle breaks, float away freely in the surrounding serum, exhibiting slightly angular contours and all the features of blood platelets.

2. If the blood of persons of an impaired constitution is prepared and kept for a few days, being examined daily, we shall, beginning perhaps on the second or third day, notice clusters of platelets which, judging from their arrangement, must have arisen from disintegration of the red blood corpuscles.

3. If we treat fresh blood with glacial acetic acid, diluted with equal parts of water, the red blood corpuscles are immediately transformed into large flat and pale plates, as already described, studded with blood platelets varying in size from the minutest visible granule, up to those of ordinary size. At the same time numerous platelets have appeared in the surrounding blood plasma.

4. The observation that the platelets arise from red blood corpuscles had been made previously by L. Elsberg, by treating these bodies with 40 to 50 per cent. solution of bichromate of potash.—["Annals of the New York Academy of Science," Vol. I. 1879.]

He says: "An indentation at the periphery of the red blood corpuscles is due to locally limited contraction of the network in the interior of the corpuscles. Contractions of the living matter in one part of the periphery will bring about a protrusion of a flap at another, the flap being bounded by the other layer of the corpuscle. Segmental contractions of the network will produce a rupture of the outer layer of the corpuscle, with projection of a pediculated granule or knob, formerly a part

of the interior network; continued contraction will be followed by rupture of the pedicle and the production of either the so-called detritus, or small granules, or, when the protruded knob is larger or has become swelled, of a pale grayish disk."

Elsberg also adds the following statement: "The peculiar corpuscles believed to be characteristic of syphilis by Lostorfer, and proved by Stricker to be present in the blood of individuals broken down by that and various other diseases, are nothing but such disks, *i. e.*, portions of the colored blood corpuscles protruded from the interior, detached and more or less swelled. As persons in low states of health have a relatively small amount of living matter in the same bulk, or, in other words, only a delicate network within a protoplasmic body, or plastid, the so-called cell, such a network suspended in a relatively large amount of fluid can much more easily contract and cause a rupture of the outer layer, than in the case of healthy persons, within whose plastids there is relatively less room for contraction to take place."

All the named observations explain why a platelet has no color and holds no hæmoglobin. If we recall the fact that a red blood corpuscle is made up of a reticulum of colorless matter, in whose meshes is suspended more or less hæmoglobin, we readily understand that the platelets, being exclusively formations of living matter, lack hæmoglobin altogether. While I am positive that the platelets are products of the disintegration of red blood corpuscles, I have made numerous observations which show that they also originate from granules, or rather points of intersection of the reticulum of colorless blood corpuscles. From whatever source, they are under all circumstances identical with granules of living matter.

As to the significance of the blood platelets, I do not claim that they are pathological. This much, however, is certain, that in the blood of perfectly healthy persons they are either very few or entirely absent. On the contrary, the more a person's health is impaired by chronic disease, the more certain we are to find a considerable number of them in the blood, when taken from the vessels a few seconds before microscopical examination. In persons suffering from syphilis, from cancer, from tuberculosis, or even from neurasthenia, we find them in considerable numbers. Lostorfer (*Medicinische Jahrbucher*, 1871), was, as he frankly admitted, mistaken in bringing the platelets into special relation with syphilis.

R. L. Watkins (*The Medical Brief*, Vol. 21, 1893), is also mistaken in bringing the platelets into exclusive relation to tuberculosis, for these bodies are always present in just as large numbers in the blood of persons suffering from other chronic wasting diseases.

Wm. Osler, in his Cartwright lectures, 1886, claims that the third corpuscle is identical with the hæmatoblast, as most other observers do. He quotes Hayem as the discoverer of the hæmatoblast, as well as of the blood platelet. I have drawn attention to the fact in the first part of my paper that Hayem is not the discoverer of the hæmatoblast, and now I will also add that Hayem was in error in confounding the hæmatoblast with the blood platelet.

Osler's views are marred by the acceptance of Hayem's error. There can be no doubt that Lostorfer in 1871 first saw the platelets, although he misinterpreted their significance. We may call Max Schultze the discoverer of the granular masses in the blood, though this excellent observer had in 1860 no idea of the life and the structure of the red blood corpuscles, which he merely considered as chemical constituents of the blood.

Guilio Bizzozero ["Archiv. Ital. de Biol." 1882] states that the platelets, which he terms plaques, serve as centers of coagulation of the fibrin, and play an important part in the formation of the white or fibrous clot of the thrombus, obliterating the calibre of the injured blood vessels, forming masses that constitute the chief element in the white of fibrous thrombus.

Wm. Osler was first to observe, in 1861, that in the more superficial part of white thrombi the blood platelets were present.

Many observations have proved that both hæmatoblasts and blood platelets circulate in the vascular system of living animals.

If we consider the fact that healthy persons have, in their red blood corpuscles, a compact reticulum of living matter, whose meshes are filled with hæmoglobin, while debilitated persons, on the contrary, have a delicate reticulum in their red blood corpuscles and comparatively little hæmoglobin, probably also of less consistency than in vigorous persons, we are at once in the position to understand the origin and the significance of platelets. The living matter during the life of the organism is at no time in perfect rest. Perfect rest means death. Contraction of the living matter in the red blood corpuscles of a healthy person will have but little effect, and rarely will cause the protusion and detachment of platelets. The more delicate the reticulum, the more effective will be the result of its contractions, especially if the hæmoglobin is scarce, and of a more liquid consistency. Contractions of living matter in this instance will easily produce knob-like protusions on the periphery of the red blood corpuscle, which, being detached, will appear in the shape of platelets floating in the serum of the blood.

In my opinion the presence of platelets in the blood in large numbers is not a pathological feature as such, but merely an indication of a pathological state of the system. Every chronic disease that causes a wasting of living matter, and a decrease in the amount of hæmoglobin, will cause the appearance of platelets in varying numbers within the vascular system.

Dr. Oergel, of the Hamburg Bacteriological Institute, died recently of an attack of cholera contracted while working in the laboratory with cholera germs. He was insured against death from accident, but not against death from disease. His widow brought suit for the insurance money, claiming that the death, under the circumstances, was really accidental, and not, strictly speaking, death from an infectious disease, but the case was lost.

REPORT OF CASE OF MIXED INFECTION.

By W. Thornton Parker, M.D., Groveland, Mass.

SOME years ago I had under my care a little girl about ten years of age, suffering with what I diagnosed as a severe attack of diphtheria. After the most careful investigation the only accountable source for the infection was a visit made at a relative's house one afternoon, where she met a child just recovering from scarlet fever.

I have never known of a case where scarlet fever has followed exposure to the diphtheritic poison, but several times I have been able to trace severe cases of diphtheria to no other source than that of exposure to some patient suffering from scarlet fever. Now, it may be at once surmised that this supposed relationship has been owing to errors in diagnosis; that in the first instance the diagnosis of scarlet fever was erroneous, or that the cases of diphtheria would have shown only the streptococci of scarlet fever and not the Klebs-Loefler baccilli of true diphtheria.

The relationship existing between these two diseases is, I believe, indisputable.

A very interesting editorial upon this subject appeared in the *British Medical Journal* of May, 1884, and in June of this same year I reported cases to that journal. Keating and many other writers have reported cases of scarlet fever complicating diphtheria.

In a recent number of the *Archives of Pediatrics* I contributed an article on the use of "Antitoxin in Scarlatina." At that time I was under the impression that Dr. Fischer considered that the use of antitoxin was contra-indicated in cases of mixed infection, or in cases of scarlet fever complicating diphtheria. But in an interview with that gentleman, at the meeting of the American Medical Association in Baltimore this year, I understood him to say that he no longer held that view, but coincided with me in my opinion that antitoxin is of value in the treatment of scarlet fever.

In the *Boston Medical and Surgical Journal* of May 2, 1895, in an editorial concerning Dr. Heubner's views on the results of sero-therapy in diphtheria, he is quoted as stating that "the presence of the Loefler bacillus is the criterion of true diphtheria, and all false membranous affections resembling diphtheria, but devoid of this bacillus, are simply *diphtheroid*."

I believe that this statement will in time be modified, and that many cases of true diphtheria will be reported where it was not possible to demonstrate the presence of the Klebs-Loefler baccilli. However that may be, I am convinced that the treatment of scarlatina with antitoxin is a rational procedure, and that a close relationship does exist between the two diseases.

Another valuable editorial in the *Boston Medical and Surgical Journal*, of May 2, 1895, concerning anti-streptococcic sero-therapy, is of especial value in this connection.

Cases of erysipelas and puerperal fever treated by Charrin and Roger showed "prompt amelioration of the general state, the sense of comfort experienced a few hours after the injection, and the speediness of the convalescence."

The admirable work carried on by Dr. Kinyoun in the treatment of smallpox with antitoxin, which has demonstrated that it has a modifying effect upon the disease, and especially upon the eruption, is very important evidence that antitoxin is capable of mitigating and even curing severe cases of scarlet fever.

The paper by Dr. Fischer, in the *New York Medical Record* of April 6, 1895, on "Some Practical Points in the Treatment of Diptheria With Antitoxin," is of the greatest value in this connection. His remarks concerning the application of the remedy will, in my opinion, apply with equal force if we use the word scarlatina instead of diphtheria. He says: "(1) To apply the remedy as soon or as early in the disease as possible. (2) To inject a sufficient quantity. (3) Remember that the remedy given to us is absolutely harmless. (4) That the same can be used for proplylactic purposes by injecting the one-tenth part necessary for healing an acute case of diphtheria. (5) It is well to remark that although we use antitoxin the patient still requires local treatment of the infected places with sublimated solution or other antiseptics; that the question of stimulants and hygienic and dietetic rules must be strictly carried out, and that, in a word, we must not expect healing wonders from this new remedy.

In thirty-six or forty-eight hours, at times, we should only look for the neutralization of the septic poisons absorbed in the body, and that therefore we can promise a great deal more in the commencement of the diphtheria by injecting a sufficient quantity, without further internal medical treatment. Emphasize, however, the extremest caution for hygienic and dietetic rules —if so, we must and will cure our case."

The following case, which occurred recently in my own practice, is interesting in showing the value of antitoxin in the treatment of mixed infection. D. S., a child twenty-five months of age, came under my care the morning of April 6th. The case was then diagnosed as scarlatina. The temperature was 103 degrees F. In the evening it had reached $103\frac{8}{10}$ F. Sunday morning the case seemed to be one of true diphtheria, or else of mixed inflection. Sunday, at 2 P. M., an injection of antitoxin from the Pasteur Institute, 20 c.c., by Dr. Vickery, of Boston, was made. The temperature remained the same, 103 degrees F, at the evening visit. Monday morning the temperature had fallen to $101\frac{5}{10}$, but in the evening had risen to 103 degrees again. The patient was very ill, and the membrane did not show any signs of breaking down. At 8 P. M., two more injections of antitoxin were employed, and on the morning of the 9th, the temperature had fallen to 102 degrees. From this time on there was a steady fall of the temperature until convalescence was thoroughly established. The patient was carefully sustained by nutrients, milk, beef-tea, brandy, etc., and anti-

septics were faithfully employed in the mouth and on the skin. It was with the greatest difficulty that the disinfection of the mouth could be accomplished in a patient so young. Glycoboron and carbolic acid were used in a steam atomizer. Pasteurine tablets are peculiarly useful in the treatment of children, as they are readily taken, being agreeable to the taste, and are decidedly antiseptic in their action. For the intense restlessness and loss of sleep I used with most satisfactory results a suppository containing

℞ Ext. hyoscyame..... grs. ss.
Ext. cannabis ind..... grs. ss.
Camphor monobrom .... grs. iii.
Lupulin..... grs. viii.
M. ft. supposit. No. iv. Sig. One night and morning.

Antiseptic sponge bathing was used after desquamation had set in; before that, olive oil with antiseptics was made use of. As an internal antiseptic, tablets containing $\frac{1}{1000}$ corros. sub. were used.

Cultures were taken on April 7th and 8th. Neither culture gave the Klebs-Loeffler bacillus, but good chains of streptococci were present each time.

Inability to find Klebs-Loeffler has not prevented post-diphtheritic palsy; in fact, the Klebs-Loeffler bacilli are said to have been found in the throats and noses of adults and children supposed to be "healthy."

Of course, those who are not willing to accept the theory that antitoxin is valuable in scarlet fever, consider its action in such cases to be inocuous.

The case is interesting in showing the value of antitoxin in controlling the fever, mitigating the eruption, and as a general anti-toxic agent of remarkable value. I believe that the amount of the injecting fluid can be diminished with equally good results.

The urine showed at times only faint traces of albumen, and was at no time different from the urine usually observed in cases of scarlet fever.

There has been no complication of nephritis or paralysis. The membranes disappeared gradually with the lowering of the temperature. This particular case would undoubtedly have been fatal had not the antitoxin been used so promptly.

Referring again to Dr. Fischer's paper concerning the therapeutic action of antitoxin: "The agent does not act at once, like drugs administered hypodermically, but requires a very distinct and somewhat prolonged period of time to do its work. This period varies from ten to twenty-four hours, and makes it essential that the remedy should be given early in the attack to effect its object." I believe that the immune serum reenforces the resisting powers which are present to a greater or less extent in all patients, and thus turns the balance in favor of recovery.

That antitoxin, if not equally valuable in the treatment of scarlet fever as in diphtheria, is sufficiently so to warrant its use in all severe cases; at least, this is the conclusion my experience leads me to arrive at.

NERVE AND DRUG AFFINITIES.

BY JAMES A. CARMICHAEL, M.D., NEW YORK.

THERE is nothing more important, more curious, nor more interesting in the whole scope of the grand science of medicine—indeed, it may be said to be the very ultimate and fundamental principle of the healing art—than the associate affinities existing between the human body in its every minutest portion, and the agents or agencies furnished by Nature, under providential supervision, increased by man's scientific exploration and ingenuity, and employed by him for the cure of the vast host of diseases that afflict humanity. May it not be truthfully declared that for every evil, physical, mental or otherwise, to which the body of man is subject by the very nature of his organization, God, Providence or Nature, or whatever name be used to designate the inscrutable power that controls the world and man's destiny, has provided a remedy? Although the tendency of all life is to death, the progress of dissolution and decay is stayed yet a little longer, because there are implanted within us certain affinities and sympathies between our bodies and the products of the earth, mineral and vegetable, harmless and hurtful, nutrient and protective, toxic and atoxic. Not only so, but the steady and irresistible march of science is daily and hourly putting into the hands of man weapons and implements of defense and offense against the common enemy that menaces everything that lives. Strange though it may seem, yet nevertheless true, that to-day the very elements themselves of man's body are being used by him to renew and restore the crumbling decay that goes on while life lasts, and that must be stayed and withstood or life will soon be as "a tale that is told." We need only to indicate the increasing use of cerebrine for affections of the brain, thyrodine for myxœdema and other kindred diseases of the thyroid body, lumbarine and testine for loss of sexual vigor and impotence, and, more recently still, the pabulum provided by the leucocytes, or white corpuscles of the blood, and their integral elements, nuclein and protonuclein, and many other experiences of the day and the hour, all tending to illustrate the potential forces of the affinities of the body. In our caption we used the word drug, which, in its generic sense, as we know, refers to all and every kind of medicinal substance. But it is capable of a wider interpretation if it be accepted as applicable to whatever may heal or cure, and we so use it. Now, in the instances named above, of the employment of certain agencies for the cure of disease by elements taken from the animal body itself, it would be logically admissable to interpret their healing influences from two points of view. For example, by what process of analytical reasoning, or by any process of reasoning that seeks to discover and to know the relations that exist between cause and effect, can we explain the potentia curandi that lies in the employment of the elements of the brain for the cure of a disease whose tendency is the destruction of the

brain substance, and the consequent loss of cerebral, or, its synonym, mental force? If we accept the idea that material brain substance is the material brain factor and procreator of mental energy, and that without that material brain substance there can be no generative or procreative power that can produce the wondrous potentiality of mental energy, then the logical interpretation of the cure by which the sick brain is restored to the generation and projection of its mental forces, by the artificial administration of the very elements of its own organic being, then, we say, we are at liberty to try to discover and explain, if we can, the how and wherefore of its resuscitation, and the renewal of its vital energies.

If the introduction into the body of cerebrine, brain substance, be followed by a reawakening of any faculty or faculties of the brain that may have been impaired or impeded by disease, then it would seem to signify that there had been restored to the brain what it had lost, and what was necessary for the performance of its functional powers. What was lost, and how was it restored? that is the crucial question. Remembering that we accept the postulate of brain substance being the factor of brain energy, then the loss of that energy must be due to the incompetency or inefficiency of the factor, material brain substance. Does the cerebrine, after being introduced into body, per orem, find its way through the medium of the circulation to the brain, and if so, does it act by affording a pabulum or brain food, for the want of which a portion or portions of the brain have been starving, and are now manifesting a reinvigorated vitality, just as when we receive nourishment into the stomach and soon the whole body responds to the rejuvenating stimulus? Then may we consent that it is by an artificial or, if you like the term better, a mechanical process, that the mental machinery has been again set in motion? How? Is it by physical substitution, or in some other way? Let's look a little deeper. What constitutes brain substance, and what are its organic elements? It is within the most ordinary education to instruct us as to its white and gray matter, its chemical constituents, etc. But what are those mysterious and incomprehensible elements that make up the great globe of the brain? What this brilliant galaxy that glows in the firmament of intellect, thought, reason, memory and all the other wondrous factors of the mind, whose evolutions shake the earth from pole to pole, and hold all peoples in a cohesive solidarity by the irresistible force of intellectual power?

We look upon a dead human brain, and what do we see? A grumous, pultaceous mass, offensive to sight and smell, and like Hamlet with Yorick's skull, we utter the involuntary pah! of repulsion and disgust. We turn away from it, but presently we begin, not like him, to question the skull whereon were hung the lips whence issued "the jibes and jests that were wont to set the table in a roar," but the inert corruption before us that first made the jibes and jests, and sent them on to delight men's ears through tongue and lips. In the whole realm of science there is nothing that challenges our hope and our speculative wonder more than the microscopic revelations of the cell structure of the brain, and the distinct and definite localization of its innumerable localities, and the nests and groups of cells that occupy them and give them form and substance. Then comes the localization of individual mental forces and powers, the products of which it is the constant duty of these same cells to generate and send forth, just as it is the duty of a secreting organ to keep up its supply for the functional office assigned to it. If this be so, then brain cells do brain work, and as brain work is the elaboration and projection of those energies that we call mind, so the mind lives in the cell and comes out of it, the living affirmation of cell potentiality. We are here reminded of another living entity, so small as to be almost microscopic, the little madrepore, the millepore, the astrean and the meandrina among the coral reef-builders of the lower Devonian Age, whose work, though beginning infinitesimally, yet from their vast numbers, their energy of deposit, and their limestone remains, "the summits of great mountain ranges in Europe, Africa and India have been formed." So it is with the cells of the brain; the boundless forces of intellectual energy spring from the smallest beginnings; and yet they occupy the earth, and scale even heaven itself in their outreaching and restless ambition.

Now to return to our cerebrine and its introduction into the body, like that of any well-known drug, and its application to the affinities of the body. The purpose is to restore a lost mental faculty or power, and if the artificial absorption of brain matter can do it, how does it do it? The cells that heretofore have generated and maintained any given faculty or mental energy, are now incapable, and fail. Does cerebrine substitute inert cell matter, and stand in its place? Can matter once dead live again and manifest life's powers? Can it restore speech where aphasia has stricken and silenced Broca's convolution? Can it awaken sound along the broken chords of Corti's columns, or lift the cloud that has darkened the tendrils of the retina? Can such things be? We are bidden to believe that they can and do exist. We have said that it would have been logically admissible to interpret the healing influences of these elements taken from the body, from two points of view.

We have considered the one by substitution, now for the other. There is a law as inflexible as are those of gravitation, attraction and cohesion. It is as old as time itself, for it has existed from the beginning of time, and will until time stops. It took æons of time to bring it to light, but one day one Hahnemann proclaimed it, and it was a day of saving grace for humanity. It has supplied the fulcrum that was alone wanting to the Archimedean lever, and to-day the world moves under its influence. It has a name, but we forbear to call it, for even now the sound of it makes the bristles of professional hate and bigoted prejudice rise up like those on the wild boar's back when he hears the vengeful yelps of "the hound's deep hate," that is tracking him to his

lair. We do not forget that a bigot in religion is intolerant enough, God knows, but we'll stake a bigoted doctor against him any day and he'll beat him "hollow," for he stands unmoved, though testimony sufficient to shake the hills should encompass him in a moral earthquake. But for all that, the law of similars stands defiant in sturdy immobility and will so stand. If then the action of cerebrine by substitution for the restoration of failing mental power be inadmissible, who shall say—except the professional bigot—that we may not invoke the unerring principle involved in the law of similars?

PHENIC ACID, COMMONLY CALLED CARBOLIC, AS A THERAPEUTIC AGENT.

(*Continued.*)

BY JAMES ROBIE WOOD, M. D., NEW YORK.

PROFESSOR ALONZO CLARK once remarked during a clinic, in the course of which he had repeated a prescription several times, that he hoped it would not be said of him, as it was of a medical neighbor, that "he prescribed iodide of potassium internally, externally and eternally." It is needless for me to explain why I sincerely echo his hope.

In the August number of the MEDICAL TIMES there were presented some general and special indications for the use of phenic acid. Many diseases might be added to the list where it has proved beneficial under certain conditions, or when used as an adjuvant to other remedies; but it is intended to present here those cases only into which few or no elements of doubt have entered.

In the first paper cases were cited where it evidenced germicidal qualities; but as such a term is misleading and doubtful, its consideration, except in a general way, will be deferred to another time.

In true typhus, phenic acid has not shown that curative power which it undoubtedly possesses in typhoid fever; but as my typhus cases were few, and soon sent to the hospitals, it would hardly be just to estimate its value on such evidence.

It decidedly benefits those patients too feeble or too old for surgical interference, whose offensive nasal discharges, taken into the stomach, especially during sleep, cause serious constitutional disturbances and at times disagreeable eruptions. An old gentleman, who had suffered for years from such conditions, was made comfortable, his unpleasant symptoms being diminished or controlled, by the constant use of phenic acid, which opposed the toxic influence of the putrid matter. In a case of this character, a tablespoonful of the one per cent. solution of the ammonia-phenate is given every two or three hours at first, and reduced to four doses a day later.

Among the lower animals it has accomplished much by preventing and curing diseases engendered by septic or parasitic causes. A veterinary surgeon, Dr. Finlay, gave me an account of twenty-two imported Jersey calves, all of which were suffering from persistent spasmodic coughs of a serious nature. Exposure causing the death of two of them, an examination of the pulmonary organs revealed large numbers of parasites lodged in the mucous membranes of the bronchial tubes. Ammonia-phenate was at once given internally, and fumes of the ordinary carbolic acid applied by means of boiling water to the remaining twenty, and all brightened up and recovered.

It possibly may be of service in yellow fever, cholera, and malignant pustule.

As the treatment of several maladies was merely outlined in the first paper, a more detailed account of several of these may not be amiss here.

Although only a student of medicine during the war, yet I was constantly called upon to undertake the medical care of cases when the surgeons were necessarily absent, or when sudden movements of the troops compelled the medical staff to leave small numbers of the sick behind, and particularly after each of the great battles had hurled its avalanche of wounded men upon the army hospitals.

Erysipelas often followed the ravages of shot and shell. As I vividly recall one poor soldier, a giant of a man, with the fleshy front of both his huge thighs torn away by artillery, who was brought to the hospital with erysipelas rapidly spreading around both wounds, I am reminded of the unfairness of comparing any treatment used in such times with the means resorted to under far more favorable circumstances. In those days erysipelas came upon men broken down by privation, hard campaigns and the shock of severe wounds, as well as the frequent absence of hygienic surroundings. Yet I am convinced that the free and well-directed use of carbolic acid would have done much to alleviate suffering and reduce mortality.

After the war I tried several forms of treatment with varying success. Among them *rhus toxicodendron* stood first, and I still use it occasionally, together with the phenic acid.

Many years ago, after a severe case of erysipelas which ended fatally, at the suggestion of Dr. Corrigan, a personal friend of Declat's, I began the use of the carbolic acid, both internally and externally. The results have continued most satisfactorily for a period of many years, with an unbroken line of not only successful, but generally quickly cured cases, and without unpleasant sequences.

In strumous persons the combination with iodine seemed preferable. Sometimes the tincture of iron was given with the phenic acid; but in comparing notes of such cases with those where the carbolic acid was used alone, the iron did not appear to be of any great advantage if the carbolic acid had been taken soon enough. Such patients' food must be nourishing and easily digested. Overfeeding is not wise, as a disturbed stomach may give trouble. There have been cases under ordinary treatment, even after the eruption had disappeared, where great anxiety has been caused by alarming attacks of fainting, produced by the microbes injuring the muscular walls of the heart. No such unpleasant symptoms have I seen thus far follow phenic acid

when used early in the disease and in sufficient quantities, such as described in the first paper. The internal administration of the one per cent. solution may not directly destroy the microbes which so seriously attack the heart during the course of several diseases, but it surely interferes with their migrations, or renders inert the septic influences which are present with them.

In determining the strength for external applications, due regard must be paid to the greater or less delicacy of the skin of the individual treated, for what might be a weak solution for one person may be very severe for another. Some can bear a one or two per cent. solution only, while others may require somewhat stronger applications.

Sometimes I use turpentine externally, applying it with a brush at full strength, immediately smearing over it simple or carbolized vaseline. Ichthyol, externally, has been of service; but a combination of turpentine, carbolic acid, and a glycerole of sulphur would be better and far less expensive.

Phenic acid in typhoid fever will be taken up in the next paper.

CYSTIC TUMOR OF THE ORBIT.*

By J. M. Ray, M.D., Louisville, Ky.

THIS patient, Mr. J. æt. twenty-eight years, I first saw two years ago. He then came to me for treatment because of some eye trouble, and it was quite a long time before I ascertained just what was the matter with him. He complained of a constant overflow of tears from the left eye, and I could not find any cause for it until one day he called my attention to a small prominence above the inner canthus of the left eye, which I had not observed. I found by pressing upon it that it disappeared. The enlargement soon reappeared, and since then it has gotten somewhat larger. No particular pain has been evidenced, but he is seriously inconvenienced by the constant overflow of tears.

I introduced an hypodermic syringe into the inner and most prominent portion of the enlargement and drew off a syringe full of transparent fluid, not quite as thick as the white of an egg, but perfectly transparent. The swelling collapsed after the fluid was withdrawn. In four or five days the sack refilled, and I aspirated a second time. It promptly refilled, and he has gone along from that time to the present without any apparent improvement. Three weeks ago, in pressing upon the enlargement, I noticed that it entirely disappeared, and it seemed to me slipped into a depression in the orbit quite far back. Thinking there might be some disease of the ethmoid cells, I looked into the nose, and found the anterior end of the middle turbinated enlarged and bulbous looking. I then decided to remove a portion of the middle turbinated and open the cavity of the ethmoid cells, and with a curette scrape out the cavity. By this I removed a considerable quantity of degenerated material, and after irrigation drained it thoroughly. It has nearly healed up now, yet the swelling at the inner angle of the orbit still remains and still annoys him. It is certainly not connected directly with the lachrymal apparatus but by pressure causes tear drops.

Any operative procedure would leave a large scar, and we would also have to cut through the canaliculus, which would produce a permanent interference with drainage of the lachrymal fluid. So that while an operation would relieve him of the presence of this cyst, the symptom of which he most complains would not be relieved, viz.: the overflow of tears. By pressing upon the inner angle of the orbit, you will observe that the swelling slips back out of reach. There is slight pain, but constant overflow of tears is the most prominent symptom. Whether this is a cyst which originates in the ethmoid cells, and I have failed to reach the cavity by curettage, or whether it is confined entirely to the orbit I am unable to say.

DISCUSSION.

Dr. W. C. Dugan: In the case before us I would make an incision, going in just at the corner of the eye, in such a manner as to avoid the lachrymal canal; then with a blunt retractor draw the lachrymal apparatus well out of the way, and bring the enlargement into view to determine the exact nature of it. I think Dr. Ray's idea as to the origin of the tumor is correct, and that it will be found to spring from the ethmoid cells.

Dr. J. M. Ray: Undoubtedly the best method would be to make an incision, but the patient objects to this on account of the scar that would naturally be left. I told him I could make an incision, but very likely a scar would result; further the chances are if the growth is of any size, in removing it, getting out the cyst wall, etc., I would have to extend my incision down so as to divide the canaliculus, and in such a case it would produce a stricture at that point. This is the only reason I have not made an incision; he objected so strongly to a scar. Another plan would be to insert an hypodermic syringe, draw off the contents of the sac, then inject iodine; but I have been rather afraid to do that as it might produce cellulitis of the orbit, and pressure upon the optic nerve might cause atrophy and greater trouble than now exists.

* Stenographically reported for this journal by C. C. Mapes.

A Degree in State Medicine.—The Rush Medical College, of Chicago, in its annual announcement offers a post graduate degree in State medicine, the title of the degree being Doctor Medicinæ Civitatis. The requirements for the degree are the following: 1. The candidate must be a doctor in medicine of not less than one year's standing. 2. The name of the candidate must have been on the matriculation books at least eight months before the examinations. 3. The candidate must have completed, subsequent to registration, six months practical instruction in a laboratory approved by the faculty, and also have studied practically outdoor sanitary work for four months, under an approved officer of health. The examination includes the subjects of State medicine and hygiene, chemistry, physics and meteorology, engineering, morbid anatomy, vital statistics, medical jurisprudence and law.

TOXICOLOGY.

BY FERD D' ORBESAN, A.M., M.D.

WHEN we are called to treat a case of poisoning, three things are to be thought of at once: (1) To eliminate the poison as quickly and as fully as possible; or to transform (2) by the aid of chemistry the poison into a substance insoluble and temporarily devoid of toxical properties; (3) Consider carefully all functional disturbances caused by the poison.

I. To Eliminate as Quickly, as Fully as Possible All Poison Taken Into the System.—Most commonly the poison has been introduced into the stomach; therefore, one must at once endeavor to take away from the stomach the particles which are still retained in it, and have not yet passed into the intestines, Therefore, we may have either recourse to the washing of the stomach, or to emetics. Of the two methods I think the washing of the stomach is superior to the use of emetics, because in reflex vomiting the contents of the stomach are not fully expelled; some particles, like in poisoning by phosphorus, the blue of Schweinfurth, adhere to the mucous coat. Therefore a rubber tube will be introduced in the stomach; let it be at least sixteen inches long; water will be used; to it may be added a substance to neutralize the poison, when known: cup. sulph. in poisoning by phosphorus; Glauber's salt, in poisoning by phenic acid, zinci sulph., in poisoning by plumbi acet., etc. If the reflex vomiting be excessive, a solution of cocaine may be used. In case of hemorrhage, some ferri perchlor. is to be added to the water.

If, owing to the tumefaction of the pharynx and tongue, the tube cannot be introduced, do not hesitate to perform æsophagotomy.

As for emetics, when the washing out of the stomach cannot be made, we may resort to: (1) 8 to 10 grammes of mustard flour in a glass of water; (2) cupri. sulph., one gramme; (3) hypomorph., hydrochlor., hypodermically. Never use oleaginous or fatty substances. A purgative quick in its action may also be administered, in order to favor the elimination of the poison from the intestines.

II. To Transform by the Aid of Chemistry the Poison Into an Insoluble Substance and Temporarily Devoid of Toxical Properties.—By this we mean to administer antidotes; but do not rely too much on this kind of remedy, for when a strong acid has already wounded the stomach and other organs, we cannot rely on an antidote to neutralize its real effects.

III. Consider Carefully All Functional Disturbances Caused by the Poison.—In every poisoning case, either intentional or unintentional, there are always some functional disturbances. Therefore the physician will have to look after the heart, the respiratory organs, the brain (coma), convulsions and alterations in the blood.

If the pulse is weak, irregular, intermittent and slow, the heart must be sustained. Here, as the peripheral circulation is poorly affected, hypodermic injections are not to be relied on too much; therefore you must ask the rectum to carry to the heart the stimulant that is at hand, *e. g.*, ammonia, gr. xxx. in a glass of water; alcohol, 3j. in a glass of wine with acacia; a strong infusion of coffee, camphorated oil, are also good agents to use. Warm compresses over the precardial region will be beneficial.

If the respiration is weak and slow, cold affusion over the back of the neck, artificial respiration, and rhythmical tractions of the tongue must be resorted to. If all these means fail, perform trachæotomy, and blow through the canula. Avoid the inhalation of ammonia, for the fumes of it might have an inhibitory influence over the respiratory center.

In coma use peripheral influence, flagellation, sinapisms, forced walk, excitants of any kind.

If there are convulsions, chloroform, ether inhaled will quiet the patient; also rectal injections of valerian will be effective, but do not use chloral.

CLINIQUE.

(1) APPENDICITIS AND BILATERAL INTRALIGAMENTOUS CYSTS—(2) PYOSALPINX FOLLOWING ANTERIOR VENTRAL FIXATION OF THE UTERUS—(3) BILATERAL PYOSALPINX WITH PELVIC ABSCESSES (4) A SLOUGHING SUBMUCOUS FIBROID TUMOR EXPELLED FROM THE UTERUS.*

BY WILLIAM H. WATHEN, A. M., M. D., LOUISVILLE, KY.

Professor of Abdominal Surgery and Gynæcology in the Kentucky School of Medicine; Fellow of the American Gynæcological Society and of the Southern Surgical and Gynæcological Society; Consulting Gynæcologist to the Kentucky School of Medicine Hospital, and the Louisville City Hospital, etc.

TEN days ago Dr. W. Ed. Grant called me in consultation to see a married woman, aged twenty-three years, mother of two children, the last thirteen months old. She had been confined to her bed for several weeks with severe pain in the lower part of the abdomen, especially in the inguinal region, and had a pulse ranging from 105 to 25, and temperature from 100° to 104° F. He had noticed some days before a tumor in each inguinal region, which may have existed for a long while, as he had made no examination previously. She was purged freely and improved a little after this, pulse coming down to 110, temperature to 101° or 102° F. She was very feeble and had lost a great deal in flesh.

She was operated upon this morning, and when the abdomen was opened adhesions of the omentum were found to be very extensive, and it was firmly bound down just above the bladder entirely across the lower part of the abdomen. These were separated and ligatures applied. The

* Stenographically reported for this journal, by C. C. Mapes.

cæcum was firmly adherent, and the appendix was found deep down, matted between the cæcum and a tumor the size of an orange. After all adhesions had been separated the appendix was removed, which I exhibit to you with a concretion that was lying in it. Then separating adhesions on the left side between the tumor and the anterior abdominal wall, and adhesions of the sigmoid flexure of the colon, the tumor on this side was also fonnd to be about as large as an orange. These tumors were immediately connected with the uterus, were between the folds of the broad ligaments, and had lifted up the peritoneum in Douglas' *cul de sac.* The surface of the tumors indicated intra-ligamentous cysts. But we may have practically the same color from hemætocele in chronic form, or from pelvic abscesses in the folds of the broad ligaments. I am inclined to think in this instance the tumors are intra-ligamentous cysts. Neither of the tumors were sufficiently high after the adhesions were separated to enable me to have brought the cyst wall in the abdominal wound and stitched it there, even had there been one cyst. In view of the fact that the woman was in an enfeebled condition and would doubtless not have withstood the shock of an operation for the removal of the cysts, I considered it best to leave them. Further, in the event of there being pus cavities, if they were opened we would probably not have been able to prevent septic infection, because we would have to treat them down in the pelvic cavity by tamponing with iodoform gauze; further, even were they intra-ligamentous cysts it might have been impossible to have dissected the cyst wall from the capsule and have treated the case successfully; further, because these cases are treated so well by the vaginal route that it is now almost universally adopted by the leading French surgeons, Pean, Richelot, and others. And finally, believing that the woman was in no immediate danger from these cysts, and that she would recover promptly from this operation and gain strength very soon I decided to let the cysts remain; then in a week or ten days, if she is sufficiently strong, go through the vagina and remove them, probably removing the uterus at the same time. The patient had no shock from the operation, though the pulse during the operation was 130. This evening pulse is 95. Operation performed at the Kentucky School of Medicine Hospital.

Case II.—This afternoon I operated upon a woman at the city hospital who had first been examined by Dr. Frank, whose diagnosis was pyosalpinx. I afterward examined her and believed she had a pus-tube. About two years ago she claims to have been operated upon by a distinguished surgeon of Chicago, Ill., for hysterorraphy. She had not complained of any serious trouble in the pelvic structures until recently, but probably had been suffering for a considerable time. For several weeks she had grown rapidly worse. The enlargement was mainly on the right side, but there were adhesions upon the other side. The adhesions in this case were considerable, just as we would expect to find with a pus tube in a woman upon whom a laparotomy had previously been done, because after laparotomy, no matter how well done, if we repeat the operation a few years later, we find adhesions. In this case the omentum was adherent to the anterior abdominal wall, to the uterus and to the tumor. It was carefully separated, and then we encountered extensive adhesions between the intestines and the uterus—old adhesions hard to separate and upon both sides of the pelvis. The tumor was behind the broad ligament, deep down, filling the lateral part of Douglas' pouch, and, as you can see, every particle of it was not only adherent, but covered above with adhesions. It was finally enucleated and brought through the wound without leakage, and is a pus-tube with the ovary attached. After its removal and further separation of adhesions upon the opposite side, it was discovered that there was no necessity for the removal of structures upon that side. Oozing was very considerable from the lacerated surfaces, necessitating tamponing with iodoform gauze after the Mikulicz fashion. There has been no hemorrhage since, because three hours afterward I telephoned the hospital and the woman had a pulse of 80.

Case III.—Ten days ago a woman was brought to my office for examination, and I found her in a feeble condition, with intense pain in the lower part of the abdomen. Upon examination I detected that all the pelvic structures around the uterus were matted together. The uterus was perfectly immovable, and from the history given I believe that the woman had had gonorrhœa. I recommended a laparotomy, and when asked what would be the dangers of delay, I remarked that I could not say; she might go for a year or two without any great trouble, or at any moment there might be leakage of the tube or tubes that might cause her death. Two days afterward she consented to the operation. She entered the Kentucky School of Medicine Hospital and was operated upon this day one week ago. The day before the operation she suffered intensely, and felt some pain after having been thoroughly purged and kept quiet for the entire day. When the abdomen was opened the pelvic cavity was found to be shut off entirely by adhesions of the ileum. Neither tubes nor uterus could be reached until these adhesions had been separated. The adhesions were not difficult to separate, because I do not think they were very old. The entire ileum seemed to be congested. While I was separating adhesions upon the right side pus gushed up, which showed that the tube on that side had been leaking; the tube had not been reached at that time. The field of operation was carefully cleansed with gauze sponges, the tube was brought up and found to be entirely open at its fimbriated extremity, pus having leaked out into the free cavity, forming a pelvic abscess, extraperitoneally, as it were, and not between the folds of the broad ligament. Upon the other side, when the intestinal adhesions were separated, the same thing occurred and was treated after the same fashion. All pus was carefully evacuated, and in doing this my finger entered so deeply

into the front abscess cavity that I was afraid it had gone into the bladder or into the rectum. One of my assistants introduced a sound into the bladder, and I found it came simply in contact with my finger through the bladder wall; an examination per rectum revealed a similar condition.

Dr. Frank assisted me in the operation, and prevented the pus coming in contact with the intestines. The pelvic cavity, and, in fact, the entire abdominal cavity, was thoroughly irrigated, and we tamponed both sides with iodoform gauze. The woman was returned to bed with a pulse of 140; two or three hours afterward it was 100; at the end of twenty-four hours it was sixty, and has remained so since. She is now practically out of all danger. Gauze was removed at the end of thirty-six hours, and there has not been any pus. The gauze was afterward removed and replaced each day when the wound was dressed. I cannot believe that the pus in this case was virulent. It is claimed that the most virulent pus occurs following abortion and labor at term. The next most virulent is that following gonorrhœa. I have doubts about the virulence of the gonorrhœal poison; I am inclined to believe that it is not so virulent, because I have time and again operated upon women where there were pelvic abscesses of this kind, and where the intestines must have become soiled in a degree, and have had no trouble whatever resulting.

I cannot believe that these patients would have made uninterrupted recoveries had the pus been virulent. I believe the most virulent of all pus is that occurring in septic troubles following labor and abortion.

Case IV.—The specimen which I next present your examination is about the size of a small orange, and has rather an interesting history. It was expelled a few weeks ago from the uterus of a woman living in Carlisle, Ky. I had operated upon the patient, curetting her uterus, two years ago. She was then a maiden lady aged fifty-four years, having passed the menopause ten years previously. She had symptoms of malignant disease of the endometrium. With the curette I removed fully two tablespoonfuls of material which, upon microscopic examination by Dr. Frank and Dr. Vissman, was believed to be malignant. Dr. Vissman was nearly positive that it was malignant. The woman returned home, and gained in strength and flesh; she had no more hemorrhage and no discharge from the uterus. Shortly afterward she married and has remained perfectly well until six weeks ago. She then began bleeding, and three weeks ago expelled from the uterus this mass. She has had no trouble since and will probably be relieved. Dr. Frank has looked at the tumor, but cannot say what kind of structure it is, and I think it is so much disintegrated that it will be impossible to ascertain by microscopic examination. I believe, however, that it is a sub-mucous fibroid which had been gradually detached from the uterine walls, until finally the blood supply being cut off it became necrosed and was expelled from the uterus.

CASES ILLUSTRATING THE PRACTICAL APPLICATION OF ELECTRICITY IN GENERAL PRACTICE.

BY SYDNEY BARRINGTON ELLIOT, M. D.

IN seeking for measures to remove disease, we are too prone to overlook tried and proved agents. No therapeutic measure to-day is meeting with greater success than electricity. It has a distinct field in practice, and every physician who is up to the times should use it intelligently. Much harm doubtless has been done by many, who, entirely ignorant of electric physics and electric physiology, give it a trial, so termed, by procuring a battery and experimenting with it on a patient. If the first effort is successful, they are encouraged to continue, and may in time learn something of the principles governing its use. But if the first effort is a failure—and this is more apt to be the case where it is so improperly applied and in conditions where it is probably not indicated—it is forever after regarded as worthless, and no opportunity lost to decry it. Every practicing physician should have a thorough practical knowledge of the fundamental principles governing the therapeutical application of electricity. He would then use it with success in many conditions where he now fails with other measures.

A knowledge of electro-physics and electro-physiology may be obtained from text books upon the subject, but cases from practice with an exact statement in each, of conditions present, courses pursued, and results achieved, convey the best idea of the utility and application of electricity in disease. The following cases, taken somewhat at random from the case-book, are commonly met with and may be of interest, although they can convey but a small idea of the wide field for application. Its greatest use, perhaps, is in diseases peculiar to women. Here it is a boon to the female sex, and has an almost unlimited use. The first two cases are those of dysmenorrhœa.

Mrs. E. M., age twenty-four, menstruated at thirteen; has always been regular, and the flow lasted five to six days; but, from the first, always suffered extreme pain during menstruation. The flow was preceded four or five days by distressing uterine cramps; she suffered most intensely, and this was followed by a discharge of thick blood. Thorough dilatation of the os accomplished nothing. The pelvic organs were normal. Faradism was applied, sedative current, one electrode in the uterus and one on the abdomen, using the large abdominal pad; began with a small current, gradually increasing. Treatment lasted fifteen minutes, and was given three times a week for three weeks. Her next menstruation was painless, and normal in every particular. She was at the office the day before the flow appeared, and there were indications of menstruation; but she would not believe it possible that her menses could come on without pain, as she had always suffered so intensely before and with every period; and using no precautions that night before retiring, she awoke the next morning to find

herself in rather a sanguinary dilemma. Her succeeding menstruations were equally painless, and she has had no return of her trouble.

Mrs. H. R., age thirty-one, menstruated at thirteen; she was regular, but always suffered much pain; had never been pregnant. The uterus was slightly antiflexed, and there was a little endometris. Galvanism was applied, using aluminum electrode (negative) in the uterus, and clay electrode on the abdomen. Fifteen to sixty ma. were given, lasting at first ten minutes, increasing to twenty, twice a week, and the whole treatment lasted two months. Her first menstruation after commencing treatment was attended with some pain, but most bearable to what it had been. Subsequently she suffered no pain whatever, and reported the same condition a year after.

The next three cases are those of amenorrhœa.

Miss J. A., age eighteen, menstruated at fifteen once, but had not had a menstrual discharge up to the time she applied for relief. Each month as the time for her menses came around, she would have considerable uterine pain, pains in the back, dizziness, and would go to bed for two or three days, but there was no discharge of any kind. The pelvic organs were normal; there was no mechanical obstruction. The os was dilated but with no result. Galvanism was applied, one pole on the uterus and the other on the abdomen, lasting five to ten minutes, and three or four times a week for three weeks, until her regular time for menstruation came around, when the flow was normal, and has been so since, now six months ago.

Mrs. D. H., age thirty, large, stout woman; prior to the cessation of her menses she had a good figure, but since then had become very fleshy; there was a great accumulation of fat about the abdomen. Her menses had always been scanty, but ceased entirely about two years before she applied for treatment. The uterus was undeveloped, cavity two inches in length. Faradism was applied, moderately coarse wire, abdominal pad, single pole in the vagina, current as strong as she could comfortably bear it, lasting ten to fifteen minutes, three times a week. The menstrual flow was re-established, lasted three or four days, more than she had ever had, and was normal. All the excessive fat was reabsorbed, and her general health was greatly improved. She had been very much indisposed to exertion of any kind, but now took up her duties with zeal and pleasure.

Mrs. S. G., age thirty-two, no children, very stout, menses irregular and lasting only about one hour and with pain. Applied galvanism, negative pole in the uterus, positive on the abdomen (clay pad), using thirty to forty ma., lasting ten to fifteen minutes, and extending over a period of two months. Her menses were entirely re-established, and have been normal ever since.

The two following cases are those of menorrhagia and will be briefly given. Mrs. S. A., age thirty-seven, would flow ten days or more over her normal time at each menstruation. Bipolar Faradism was applied in vagina, 16-wire, five minutes; one treatment entirely stopped it.

Mrs. K. R., aged thirty-eight, flow lasting seven or eight days over her normal time. Intra-uterine bipolar Faradism, 16-wire, one treatment of five to ten minutes stopped it in a few hours.

The following case is one of endometritis: Mrs. R. T., aged twenty-eight, subinvolution of the uterus from miscarriage. Uterus had been curetted, but no good results. Applied galvanism 20 ma., followed by bipolar Faradism 22-wire ten minutes. At first twice a week, then once a week, and later every two weeks. In three months the endometritis had entirely disappeared.

Nor is the application of electricity to the genital organs confined solely to the female. It has a valuable sphere in many troubles of the male, such as sexual debility, strictures, cases of long standing gonnorrhœal conditions, cystitis, etc. The following case is one of interest and one frequently met with:

Mr. E. S., aged thirty-seven, had entire loss of sexual power. He was debilitated and depressed. Faradism was employed, one electrode to each testicle, then one electrode in the urethra as far as the prostate and on the sacrum, sometimes sponge electrode on the perineum, five minutes in each locality, medium wire, twice a week for five weeks. Applications of cold water to the genitals were also used. The result was a complete restoration to the normal state, not only sexually but generally, and a cheerful frame of mind.

There is no class of cases where electricity has a better application, nor where it is more needed than in those of constipation; and when one considers the readiness with which it is applied, with almost unvarying success, its immunity from pain or unpleasant effects of any kind, when properly used, it is hard to conceive why it is not more generally applied. The two following cases are of interest:

Mr. G. M., age forty-eight, bilous temperament, had been a sufferer from constipation and its accompaniments for twenty-five years. He had tried everything; took enormous doses of purgatives to get a movement, and then only every three or four days, and with difficulty. There seemed to be a paralytic condition of the intestines; there was dilatation and complete atony of the rectum. Hemorrhoids were present, and gave him much trouble. He suffered from severe headaches, was greatly debilitated, and his memory and whole mental condition were much impaired. He was, in fact, a complete physical wreck. He was a constant sufferer from dyspepsia, and could digest only the simplest baby foods. Galvanism was applied, using at first the negative pole to the spine and positive pole to the abdomen, kneading the abdomen with a sponge electrode. Later the roller (electro-metal covered with chamois) was used, and the abdomen rolled and kneaded with it. Treatment was applied three times a week, at first for ten minutes at a time, later increasing to twenty, and the current was given as strong as he could bear

it, gradually increasing it. After a few treatments with the galvanic, Faradism was alternated with it, giving each for ten minutes. This was continued for two months, after which the galvanic was given alone, using one pole over the sacrum (negative) and the other on the perineum and in the rectum (a cylinder). This was followed out for a month, gradually decreasing the current. The patient's condition, by degrees, became perfectly normal. He had normal actions from the bowels, his digestion improved, and his whole condition greatly changed. About a year after there seemed to be a tendency to a return of his trouble, but a few applications completely overcame this, and he has been well ever since.

Miss A. E., age forty, large, well-developed woman, weight 180 pounds, had been a constant sufferer from constipation for ten years. She could not have a movement without resorting to drugs, and long-continued use of enemas had caused a relaxed condition of the rectum. Galvanism was applied at first four times a week, toward the end of the treatment not so often—once or twice a week. The Faradic current was alternated with the galvanic, as in the previous case, giving each for ten minutes at first, later for fifteen minutes each, and gradually decreasing. The fine wire was used at first in the Faradic, and later the coarse wire. The treatment was continued ten weeks, and her condition gradually became normal. She had a fibroid of the uterus, and when the constipation was relieved, this almost entirely disappeared, probably due to the return to normal of the circulation in the pelvic organs, the bowels getting a normal supply of blood, and consequently that of the tumor being decreased. Her condition was completely cured; she never had a return of it, and this is three years since.

I consider electricity the most available means we have to-day for obstinate constipation. It can also be applied to great advantage in prolapsus of the rectum, hemorrhoids, etc.

It has an excellent application in neuralgias of all kinds. The most severe headaches can often be stopped at once. The three following cases are not infrequently to be met with:

Mrs. A. R., age twenty-six, had been suffering for two days from the most intense neuralgia of the face. She had not slept for two nights, had resorted to morphine, chlorodyne, and cannabis indica. Faradism was applied, sedative current, for fifteen minutes, gradually increasing the strength. Relief was immediate, and for the first time in three nights she slept all night. Two days after there was a slight re-occurrence, when she received a second treatment. She had no return of her trouble.

Mrs. B. H., age twenty-nine, for two years had been suffering from ovarian neuralgia. Three months before applying for relief, had a miscarriage at three months, and her suffering had become much intensified. She had been treated by several experts, but to no avail. Since her miscarriage she suffered so much she was incapacitated for her duties. Faradism was applied, sedative current, beginning with mild current and gradually increasing, lasting fifteen minutes, one pole in the vagina and one on the abdomen. The result, after a few treatments, was entire relief. Subsequently there seemed to be a tendency to return of her former condition, and she was given a few more treatments. Since then she has had no return whatever, and is entirely relieved of her trouble.

Mrs. L. R., aged thirty-five, had been suffering from neuralgia of the left arm for nine months, she could sleep but little, and suffered very much. Applied Faradism every day for a few days, then every other day for two weeks, five to ten minutes at a time, one pole up and down the arm, and one pole on the nape of the neck. She was entirely cured of her trouble, and has had no return of it.

Good results can often be obtained by using electricity in renal colic. Galvanic current, positive pole over the kidney and negative over the bladder. In several cases I have known, the results have been almost magical.

It has a useful sphere in removing moles, superfluous hair, cysts, some forms of tumors and goitres. One case of the latter I recall is that of a young woman, medium sized goitre, galvanic current used, positive over the goitre, negative on the back of the neck, for twenty minutes, three times a week. In seven weeks the goitre entirely disappeared, and there has been no return of it.

Electricity can be applied to great advantage in functional troubles, liver disturbances, indigestion, sick headache, spinal irritation, neuralgias, etc. It is excellent to use in general debility, anæmia, neurasthenia; here it exercises a powerful tonic effect. Static electricity should be used for such troubles; no tonic is like it.

Some of the other conditions in which electricity has a useful sphere, are: uterine displacements, flexions, stenosis, induration, perimetritis, ectopic pregnancy, salpingitis, celluletis, subinvolution, ovarian tumors, ovarian irritation, fibroids, enlarged glands, impotence, spermatorrhœa, seminal emissions, incontinence of urine, hysteria, chorea, anchylosis, œdema, and it has a distinct field in mental diseases.

I should like to submit further cases, but time and space forbid. I hope to do so at a future date.

In conclusion, it is but necessary to say that in electricity we have a powerful agent with which to combat many forms of disease, and that it is by far too little used.

A New Symptom of Cancer.—G. Bogdan (*Brit. Med. Jour.*), relates the case of a woman, aged forty-eight, who suffered from cancer of the stomach. The disease had gone through a long period of latency. The patient presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules; the stain showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone Bogdan was able to make a diagnosis of probable cancer at a time when there was yet no other manifest sign of that affection. He looks upon such superficial varicosities on the cheeks as a valuable help to the early recognition of certain cancers; he has seen it in about two-thirds of the cases of cancer which have come under his observation; it is particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant diseases of other organs.

CLINICAL LECTURE.—DIABETES.—CIRRHOSIS OF LIVER IN A CHILD.*

By Dr. William H. Draper, New York.

A CASE of diabetes.—This man is thirty-four years old. Objectively, there is nothing particularly interesting about the case. Subjectively, the case is interesting, for the reason that it is a perfect illustration of a purely chemical disorder: that is to say, a disease which consists in the arrest of a physiological function. Diabetes is characterized by the presence of sugar in the urine, and no lesion is found in these cases, not even in those which result fatally, to explain this particular symptom. After death from this disease the organs may be found in a perfectly healthy condition, and we are left in the dark as regards the morbid anatomy, unless we except those cases in which a grave form of diabetes is associated with a brain leison; ordinarily, no lesion can be found to explain the cause of the disease. There are, however, certain secondary lesions or complications, and of these I have already spoken to you at previous lectures. Among them, I alluded to cataract and phthisis; the latter complication, which terminates the lives of many diabetics, is not a tubercular phthisis, but a chronic inflammation of the lungs.

The skin affections met with in diabetics are of considerable importance. One of the most common and distressing is pruritus, which is generally local in character, although it may be general. Its favorite location is in the region of the genital organs, where it is excited by direct contact of the urine; it is naturally more common in women than in men, for the reason that it is more difficult for the former to preserve the parts from contact with the urine Again, diabetes may give rise to a general pruritus, which is sometimes so severe as to drive the patients almost crazy. This is due to the dryness of the skin, which appears to be the determining factor in producing itching. Then there are more serious skin affections, such as furuncles and carbuncular inflammations, and in connection with these there is a practical point to which I desire to call your attention. Never blister a diabetic; never irritate the skin with any rubefacient or any of the remedies commonly employed for the relief of irritation and pain. Be careful especially of the stronger rubefacients, like mustard, for they may give rise to tegumentary inflammations of serious import.

The affections of the mucous membranes met with in diabetes are also more or less important, and manifest themselves in a tendency to constipation and in catarrhal conditions of the pulmonary tract. They are sometimes very troublesome, and may require careful attention. The only actual complication of diabetes is perhaps cataract. This is of very common occurrence. No satisfactory explanation of how it is produced has been given. The sugar circulating in the blood seems to produce a structural change in the lens.

Two forms of diabetes are recognized, the benign and the grave, and the prognosis depends upon which of these two you have to deal with. In many instances the benign form is consistent with apparent perfect health; you will often find sugar in the urine of patients where you do not expect to find it, and where its presence is not associated with any of the symptoms commonly met with in diabetes. You may find it in the urine of hale, healthy men, who are capable of doing a hard day's work, and who appear to be perfectly well. These are usually obese persons, strong and vigorous, of a sanguine temperament, and in such cases the sugar can, as a rule, be easily made to disappear by putting the patients on a proper diet.

With regard to the grave form of diabetes there is not much to be said. Such patients, by careful attention to diet and by proper medication, may temporarily improve, but they do not get well, and sooner or later a fatal termination ensues. As regards treatment, the most important part is the correction of the diet. Many drugs have been recommended in these cases, too many for me to enumerate. In cutting off the sugars and the starchy foods, it is well not to be too rigorous; commence by lopping off the desserts and those articles that can be dispensed with most readily. It is important to cut off the wine, beer and cider. A little whisky may be permitted. I am of the opinion that fermented liquors give rise to a great deal more trouble than does alcohol in its pure state. I believe more gout, more rheumatism, more functional derangement is produced by fermented preparations of alcohol than by distilled spirits, especially in persons past middle life, and sometimes long before that period. All of us sooner or later reach what has been truly called the "whisky and water age," when we have lost the power of digesting beer and wine, and still happily retain the power of digesting small quantities of distilled spirits. This period may come on before a man reaches middle life or old age. A man becomes old when his vessels get old, and then he has arrived at the whisky and water age.

Among the more important remedies that have been recommended in the grave form of diabetes are the coal-tar derivatives, especially the salicylates, but they have no marked effect. Opium is perhaps of all remedies the most efficient. I do not know whether the drug acts by assisting in the proper conversion of the food, or whether its good effects are produced through the nervous system by controlling the marked depression which is a part of this form of diabetes, but it is a fact which has long been known that diabetics live on opium and cannot live without it. There is no other remedy which controls so well the amount of sugar excreted. I do not believe that opium has any specific effect in diabetes, but it certainly prolongs the lives of these patients.

CIRRHOSIS OF THE LIVER IN A CHILD.

This little girl is ten years old, an Italian. Her

* Delivered at Roosevelt Hospital, New York, February 18, 1895. Stenographically reported for this journal.

family history is negative. She has gradually been failing in health and losing in flesh and strength during the past four months. She also complains of abdominal pain. There is no history of jaundice. I show you this patient, because she is suffering from a disease which is rarely met with in children—namely, cirrhosis of the liver. The shape of the abdomen is very characteristic; it is swollen not only in front, but also on the sides. As I percuss, you will see that the area of hepatic dullness is very much reduced. In percussing the chest or abdomen it is not necessary to employ much force. There are physicians who, when they percuss, always bring to mind the lines of Dr. Oliver Wendell Holmes:

"Doctors exist within a hundred miles,
Who thump a thorax as they'd hammer piles"

It is quite possible to acquire the art of delicate percussion if we only attend to something more than the mere sound elicited. In percussing a hollow viscus, for instance, as I am doing now, there is something more than mere resonance to be elicited. There is a feeling communicated to the touch that is almost as significant as the sound. Resonance is always associated with more or less elasticity or resiliency, which can be appreciated by the touch without making any sound at all.

ETHICS FOR GROCERYMEN.

In the current number of our entertaining contemporary, the *Cincinnati Medical Journal*, we find some extracts from "a proposed code of tradesman's ethics, based upon the code of medical ethics." The section explaining "the duties of tradesmen to their customers" begins with the grocers, who are admonished as follows:

"Every grocery boy, on entering the grocery trade—as he becomes thereby entitled to all its privileges, perquisites and immunities—incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and extend the bounds of its usefulness. He should, therefore, observe strictly all rules that are instituted for the government of grocery boys, and should avoid all contumelious and sarcastic remarks relative to the grocery trade as a body. While by unwearied diligence he resorts to every honorable means of enriching the trade, he should entertain a due respect for his competitors in the same, who have by their labors brought it to its present elevated condition.

"A groceryman should not be a pickpocket or a horse thief. He should maintain a high standard of moral excellence and not commit murder or arson. No superior quality of goods can compensate for his want of correct moral principles. A steady hand, an acute eye, and an unclouded head are essential if he would maintain his reputation and customers.

"It is derogatory to the dignity of the grocery trade to resort to public advertisements, or private cards, or handbills, inviting the attention of customers affected with particular appetites, or publicly offer to the poor, gratis, bread and bacon, or promise full stomachs; or to publish cases of thin men made fat in the daily prints, or suffer such publications to be made; or to invite hungry men to be present at displays of groceries, or to boast of pure goods and honest weights, or to adduce certificates of appetites satisfied, or to perform any other similar acts. These are the ordinary practices of enterprising grocers whose groceries will bear inspection, and are highly reprehensible in a regular association grocer, whose goods will not stand the open daylight of publicity.

"All grocerymen are entitled to the gratuitous groceries of any one or more of the trade residing near them, when they happen to be hungry and hard-up. A grocer afflicted with an appetite is invariably afraid to eat his own groceries.

"A grocer should never insinuate that the groceries of another association grocer are of bad quality, no matter how thoroughly the sugar may be sanded, or the vinegar watered. However, it is the duty of association grocers, at every possible opportunity, to denounce the groceries of non-association grocers."

DR. HAMMOND'S ANIMAL EXTRACTS.

Dr. William A. Hammond made another move recently in the litigation between himself and the Columbia Chemical Co., over the manufacture of animal extracts, by filing a cross-bill. The Columbia Company, according to the reports, brought a petition in equity May 17th last for an injunction to prevent Dr. Hammond from manufacturing the extracts except under a contract signed some months ago with the company. This was granted as asked after argument, saving certain restrictions about the use of Dr. Hammond's name in advertisements.

The cross-bill asks that the contract between Dr. Hammond and the Columbia Chemical Co. be dissolved. It is claimed by Dr. Hammond that the company is publishing advertisements and letters that are false and fraudulent, and that extracts are being manufactured at the office on Fourteenth street, although the contract specifies that they shall be manufactured under Dr. Hammond's supervision. Further, complaint is made that the company has sold medulline under the name of muscaline because their stock of the former was exhausted when an order was received from a customer. A last charge is made that the company is now selling extracts made from materials bought in Chicago and transported in an ice box, being four or five days in transit. It is urged that this impaired the virtue of the medicine, and that the company has refused Dr. Hammond a request to re-treat it.

THINGS WORTH KNOWING.

A broken cup handle may be made very nearly as good as new by using a thick paste of gum Arabic and water, into which has been stirred plaster of Paris until the mixture is of the consistency of cream. Perhaps there may be lamps to clean among your duties. If so, perhaps you will like to learn that if a new wick, before being used, is soaked in vinegar and allowed to dry, it will never smoke. And that your chimneys should never be washed, but rubbed clear with a cloth dampened with alcohol. When your burners get black and sticky, carry them to the kitchen, pour vinegar into a pot, add a tablespoonful of salt and leave the burners to boil in this. They will come out nearly as fresh as new. Have you the dining room windows to wash? No need to slop water about. Pour upon your wet cloth a little kerosene, rub the panes dry with newspaper and polish with a soft towel. Equally clever and labor-saving is the method of polishing your mahogany dining table, using one part of vinegar to three of pure raw linseed oil, and, with a soft woolen cloth lightly dipped in this, polishing it to a mirror-like surface. You may also brighten and clean gilt frames with a brush dipped into a pint of cold water in which is mixed a gill of vinegar.

HOMŒOPATHY IN MEXICO.

Two years ago the first Homœopathic hospital ever established in this republic was inaugurated under the special protection of President Diaz, to whose encouragement Homœopathists here owe governmental recognition of their school of medicine. The report has just been issued, July 14th, covering two years' work. Nearly 40,000 patients were gratuitiously treated in the dispensary department. The number of dispensary patients will, this year, reach 30,000.

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CALCIUM CARBIDE.

THE elements now known to the scientist number about seventy-five. From the combination of these elements all matter in the universe is formed. They are the elementary germs everywhere existing, in the whole or in part evolving into star dust, suns and planets in every process of formation and life. Some of these elements play, as far as is known, a comparatively unimportant part in the work of creation and life. A single discovery, however, opens the door to a new world, and solves mysteries which have long puzzled the brightest minds. The discovery of the fact that nitrogen, as generally understood, was not a simple element, but contained another element united with it, *argon*, opened the way for the discovery of still another element, *helium*, known to exist in the sun, but never found on the earth, and this element is shown by the spectroscope to be the same as that which gives the brilliant colors of the Aurora Borealis as it spreads over the northern sky and flashes to the zenith, moving hither and thither like the mighty armies pictured by Milton in his "Paradise Lost." It has been hinted, although the idea is scouted by the chemist, that this new element, *helium*, may be the original element from which all others have been evolved. In this connection it will be interesting to trace the evolution of two simple elements, among the most common known in the world, and note when the key is obtained how easy it is to form combinations which may affect every department of life and be felt in every home.

A new illuminating gas, which can also be utilized for heating purposes and for furnishing an almost unlimited amount of power, is attracting the attention of commercial minds. From a scientific and practical standpoint the newly developed compound seems destined to work a revolution in the development of light, heat and power. Acetylene, the gas which has recently come to the front with such promise of success, may be obtained cheaply, and in abundance, by combining coal and calcium, both reduced to an impalpable powder, and fusing them together in an electric furnace. This combination, which when melted by the intense heat of the furnace resembles slag and is called *calcium carbide*, when thrown into water takes up one of its elements and liberates from itself another, setting free the acetylene gas with its intense illuminating power, with a light even more pure and white than electricity. A cylinder of the calcium carbide placed in the corner of a room with a little water dripping upon it would furnish light for the whole house, and if the calculations of the projectors are correct, at much less expense than any gas now known. There is no doubt about the power and beauty of the light, the question now being one of expense. That problem will undoubtedly be worked out in time. It is claimed now that the calcium carbide, with water power to run the dynamos, may be made for less than twenty dollars a ton. From one ton of calcium carbide it is claimed that 812 pounds of acetylene gas may be obtained, at a cost of only two and a half cents a pound. It will readily be seen that the great cheapness of the product and its rapid conversion into light, heat and power, and the ease with which it can be adapted to the arts and manufactures, will make it a potent factor in the manipulations of commerce.

It will be interesting to follow up this gas through its various combinations, and note the results. In the preparation of Sanitas, a current of oxygen is passed through turpentine and water, causing a separation of the molecules and rearrangement of the atoms into peroxide of hydrogen, camphoric acid, and thymol. In like manner, passing acetylene through an iron tube heated to dull redness, it goes rapidly and completely into benzine without the formation of any other product. Turning to your chemistry, you will find that benzine is the base of thousands of organic substances. The aniline colors in their variety and beauty, have within the past few years taken the place to a very great extent of the more expensive vegetable and animal dye stuffs, but by the new process the cost of these products

will be reduced to a minimum. Pass the pure benzine vapor, which we have obtained from acetylene, through strong nitric acid, and we get nitro-benzine, and this, treated with hydrochloric acid and iron filings, is converted into aniline. It is estimated that one ton of calcium carbide, costing twenty dollars, will produce about 950 pounds of aniline of every variety of shade. If the market is glutted with aniline for dyeing purposes, we can easily convert it into carbonic acid, to be used for the manufacture of ice, or for cold storage; then, it is but a step to picric acid, the foundation of those modern explosives which are tunneling the mountains and converting our forts and war ships into immense engines of destruction; or again we can use its potent power in reducing the temperature of the fever stricken and moistening the parched skin by combining it with acetic acid and transforming it to acetanalide or anti-febrin, the well-known fever specific. Alcohol, oxalic acid, formic acid and prussic acid result from the combination of acetylene, with slight manipulation, with hydrogen, sulphuric acid, permanganate of potash and ammonia. It will be seen that two simple elements, among the most abundant of all, a lump of coal and a piece of lime, form the basis of an almost incredible number of products of startling variety and power, from the generation of light and heat and explosive power to the beautiful tints of the delicate fabrics of dress, the potent agents for the relief of suffering in the sick room, the fragrant perfume of the toilet and the appliances so essential to the manufacturer, the artist and the scientist.

EMBRYOLOGY.

IN condensation of thought, in clearness and beauty of word-painting, no writer can excel the close student of Nature. It is in the study of the natural sciences that we touch the life, the heart of Nature, and feel the strength of its pulsations, the sweetness of its breath and its vital force. The necessary searching analyses and grouping of facts train the mind in clearness and force of expression which can only be gained by close communion with Nature. In Drummond's "Ascent of Man," for instance, facts, not specially new to scientists, are linked together so harmoniously and with such strong effect that they form a chain from the lowest to the highest form of life, from the single cell of protoplasm to man, a chain which at least has the strong semblance of scientific truth. The development of the human embryo, as sketched by Drummond, is a masterpiece of word-painting and grouping of scientific facts. "Between the early cell," he says, "and the infant's formed body, the ordinary observer sees the wonderful passage of a few brief months. But the evolutionist sees concentrated into these few months the labor and progress of incalculable ages. Here before him is the whole stretch of time since life first dawned upon the earth; and as he watches the nascent organism climbing to its maturity he witnesses a spectacle which for strangeness and majesty stands alone in the field of biological research. What he sees is not the mere shaping or sculpturing of a man. The human form does not begin as a human form. It begins as an animal, and at first, and for a long time to come, there is nothing bearing the remotest semblance of humanity.

"What meets the eye is a vast procession of lower forms of life, a succession of strange inhuman creatures emerging from a crowd of still stranger and still more inhuman creatures, and it is only after a prolonged and unrecognizable series of metamorphoses that they culminate in some likeness to the image of man, who is one of the newest yet oldest of created things. Hitherto we have been taught to look among the fossiliferous formations of geology for the buried lives of earth's past. But embryology has startled the world by declaring that the ancient life of the earth is not dead. It is arisen. It exists to-day in the embryos of still living things, and some of the most archaic types find again a resurrection and a life in the form of man himself. It is an amazing and almost incredible story. The proposition is not only that man begins his earthly existance in the guise of a lower animal-embryo, but that in the successive transformations of the human embryo there is reproduced before our eyes, a visible, actual, physical representation of part of the life history of the world. Human embryology is a condensed account, a recapitulation or epitome of some of the main chapters in the natural history of the world. The same processes of development which once took thousands of years for their consummation, are now condensed, foreshortened, concentrated into the space of weeks. Each platform reached by the human embryo in its upward course represents the embryo of some lower animal which in some mysterious way has played a part in the pedigree of the human race, which may itself have disappeared long since from the earth, but is now and forever built into the inmost being of man. These lower animals, each at its successive stage, have stopped short in their development; man

has gone on. At each fresh advance his embryo is found again abreast of some other animal embryo a little higher in organization than that just passed. Continuing his ascent, that also is overtaken, the now very complex embryo making up to one animal embryo after another, until it has distanced all in its series and stands alone."

WHEN IS RESUSCITATION FROM CHLOROFORM IMPOSSIBLE?

AMONG the conclusions announced a few years ago by the celebrated Hyderabad Commission, as the result of their elaborate investigation into the toxic effects of chloroform and its method of producing death, the following, perhaps, was practically the most important: "That resuscitation after cessation of heart action is impossible." This assertion is flatly contradicted in the *Louisville Medical Monthly* for December, 1895, by Dr. C. A. Rice, whose argument is mainly based upon what he regards as "in several particulars the most remarkable case on record of death and resuscitation from chloroform." Dr. Rice, at the time of the occurrence related, was a surgeon in the Confederate Army, and the scene was the headquarters of his brigade, a short distance in the rear of where Generals Johnson and Sherman were facing each other at Kenesaw Mountain in Georgia. Lieutenant-Colonel Ross, commanding a Mississippi regiment, having occasion to visit these headquarters, was invited to take "a nip of good brandy," but received instead a bottle of chloroform, from which he drank at least six ounces. The mistake was immediately detected, and three surgeons—including Dr. Rice—were quickly on hand; but in spite of all that was done, the victim's respiration within a few minutes ceased, the pulse at the wrist becoming slower and fainter, until it could be felt no more, which was in turn soon followed by cessation of all heart action. Artificial respiration was at once resorted to, but to no purpose, and he was pronounced by all to be dead. "His friends were even taking some wide planks from the kitchen loft to make him a coffin."

Dr. Rice at last suggested a trial of tracheotomy, which was agreed to in sheer desperation, and carried out by him with such appliances as were at hand. This was about 8 o'clock, the chloroform having been taken before sundown. The operation completed, and the tube secured, artificial respiration was begun again. "By this time," we are told, "that algid condition of *rigor mortis* had made its appearance." Hot irons and stones were applied, and blankets wrapped around the body. About 10 o'clock some heart action began to be perceived. The artificial method was kept up until 4 or 5 o'clock in the morning, when the patient was aroused to some degree of consciousness. About noon of the same day he was removed to a rear hospital, where he made a nice recovery.

"Here," observes the writer, "we have not less than sixty minutes' cessation of respiration and the same of cardiac impulse before the opening of the trachea and renewal of artificial respiration. I am quite sure, from my use of the drug, that chloroform has and does exercise the power of arresting or prolonging the coagulability of the blood. Without this condition present in this case I think the hypostatic congestion of the capillaries would have been a permanent barrier to the re-establishment of the systemic circulation, especially as he lay all this time in one position—on his back.

"In this case artificial respiration was kept up for about eleven hours; to have stopped it any sooner would have been certain death. It will be evident to any physician that the Hyderabad Commission is in error when it declares that resuscitation after the cessation of heart action is impossible."

WORK HELPS TO LENGTHEN LIFE.

CHIEF JUSTICE FULLER, in a recent conversation with a friend, emphasized a fact which the medical profession has always tried to impress upon the minds of those who are retiring from business after a longer or shorter life spent in its exacting details, that idleness following an active and laborious life is almost sure to be followed by an utter breaking down of health or an early death. The dry rot of aimlessness eats out existence, and the body with nothing to do and the brain with no work to accomplish soon sinks into decay. If this is true of the eminent jurist retiring from the bench of the Supreme Court, it is equally true of those engaged in any work requiring active brain power. The brain is much more liable to become inert from the rust of idleness than from overwork. The business or professional man looking forward to the luxury of rest following long continued labor, should be careful lest in putting on the brakes too suddenly the brain becomes fallow, life cease to be a pleasure, and the halting footsteps and the cloudy brain, indications of decay, come long before their time. If you would live to a good old age never cease to work, in moderation it is true, but still work.

WOMEN PHYSICIANS.

IN 1849 the first medical diploma was conferred upon a woman in this country by the Geneva Medical College, a small institution in the central part of the State. Less than fifty years have passed since that time, and now women practitioners of medicine number in the United States more than 300, located mostly at North and West, and meeting with as much success as a corresponding number of the opposite sex. For many years all the women graduates were from female colleges in New York, Philadelphia and Boston; now in addition to their colleges in different parts of the United States, they are admitted into most of the State universities at the West, and pursue their studies side by side with the men, enjoying the same advantages. The State University at Ann Arbor, Mich., was the first to open its doors to women, and the Johns Hopkins University, at Baltimore, the last. In both institutes there are large classes. As a rule women are excluded from taking any part in public hospitals except in the State insane hospitals, where the law requires one female physician to every hospital. The few women who have been employed in the summer service, by the Health Department in New York, have shown by their faithful and excellent work, an ability equal to their male confreres. The impetus which has been given within the past few years to female education in our profession, will soon place them side by side in our public hospitals with their male confreres.

CONSANGUINITY AND MORBID HEREDITY.

THIS important subject was discussed at a recent meeting of the French Academy of Sciences (*Universal Journal of Medicine*). M. G. Lagneau stated that an injurious influence upon the offspring was often attributed to the consanguinity of the parents, whereas in reality the true factor was morbid heredity. Zoology, history and demography show that healthy consanguinity is not in the least harmful, and is even of advantage to the offspring. Certain animal species, as the roebuck and pigeon, almost always form consanguineous unions, while the value of "breeding in and in" is well known. Fustel de Colanges recalls the fact (*Cite Antique*, p. 81, 1888) that, among the Greeks, brothers and sisters of the same father, but of different mothers, could marry each other. When the Ptolemies, of Grecian descent, became sovereigns of Egypt, the brothers and sisters frequently intermarried for dynastic reasons. Cleopatra herself, the beautiful and seductive, married her two brothers, Ptolemy XII. and Ptolemy XIII.

In France, consanguineous marriages are much more distant; but between cousins and cousins, uncles and nieces they are frequent, and far less harmful than is generally supposed. Revillout, Voisin and Aubert have noted the healthfulness of the salt miners of Batz, where intermarriage is so frequent that, of 2,733 inhabitants, 490 bear the name of Lemede. Lancry observed that four families of Picardy, who established themselves in 1670 at Fort Mardick, in a Flemish province near Dunkerque, in spite of consanguineous marriages, formed in 1866 a population of 1,481 inhabitants, who appeared to have excellent health and vigorous constitutions.

M. Gueniot remarked that he had, in his practice, observed a number of cases of the marriage of cousins-german, nieces and uncles, and that he considered M. Lagneau's opinion perfectly justified in theory, though in certain instances of close relationship he had noticed the birth of sickly or deformed children. In one instance, in which the husband was the uncle of his wife, of six or seven children but one could be raised, a deaf-mute girl. However, it frequently happened that the interested parties were very careful to conceal any hereditary taint, and it was therefore best to exercise the utmost prudence in authorizing the marriage of near relatives.

TUBERCULOSIS.

PROFESSOR MARRAGLIANO, of the University of Genoa, read a paper at the Medical Congress at Bordeaux, early in August, giving the result of two years' experience and experiment in the treatment of tuberculosis, in which he but followed to a certain extent the same line of investigation as that marked out by Professor Koch, with, he thinks, much better results. The cause of his success over that of Professor Koch, he thinks is in the manner in which his vaccination of animals is made. The Professor's paper was received with marked attention, and will without doubt interest the profession on this side of the Atlantic. "I have drawn the serum," he says, "from dogs, donkeys and horses. I have set aside cultures with living bacilli. I have employed exclusively strong toxical substances extracted from very virulent cultures of human tuberculosis and capable of killing guinea pigs in two or three days. No one has ever employed for the vaccination of animals any substance possessing such great toxic power. An analysis of the eighty-three patients of all forms of consumption

in which I have employed the treatment leads me to the following conclusions: Consumptive patients, presenting but small centers of tuberculosis without fever, or even with slight, without or with few microbe centers, derive marked benefit. Of the forty-five cases of this character treated, all, numbering twenty-nine, who followed the directions were cured. Broncho-pneumonic tuberculosis patients with extended centers of disease, without fever, or even with fever with few microbic colonies, may be entirely relieved of fever and success obtained in certain cases. Fourteen of these cases have been treated, and in all the conditions have improved. All of these cases are still under treatment. The broncho-pneumonic patients with extended and numerous microbe colonies derive but slight improvement from treatment. I have treated nine. The condition of two improved for a short time. They had suffered from fever for several months, and this was abated. One gained four and four others two kilograms in weight. Believing themselves out of danger, they left the hospital. One died after a year. It is not known what has become of the other. Great improvement took place in his condition. In the case of a third patient the fever disappeared. He gained a kilogram in weight and is still under treatment. The condition of four remained stationary; two died. Of the total eighty-three patients treated in all stages, sixty-one derived real benefit."

BOTANICAL GARDEN.

NEW YORK is soon to have what it has long needed, a botanical garden. The garden will be located on the Bronx River in the Bronx Park, a portion of the territory recently included in the city, and will contain two hundred and fifty acres of the most desirable portion of the park, a space sufficiently large to suit all the demands of science and pleasure in that direction. To the student of botany and materia medica the garden will be a most instructive school, and to the public generally a never-ending source of pleasure. The site of the new home of botany is beautifully adapted to the cultivation of flowers. The soil is fertile and the Bronx furnishes abundant water, and is a most picturesque and attractive portion of the park. The garden will be worthy of its magnificent scenic setting, and will include not only our flora but also the variegated and fragrant plants of other climes, and excel in beauty, variety and extent the famous gardens of London, Paris or Vienna. That there will be no want of money to carry into full completion the enterprise will be seen from the fact that in addition to the $500,000 appropriated by the city to lay out the garden and erect the buildings, $250,000 have already been subscribed by private citizens, and almost any amount more can be had for the asking, so strongly does the enterprise appeal to public favor. Calvert Vaux, the landscape gardener of the Park Board, has already mapped out the plot, and is directing the work which the energetic president of the board assures us will be pushed forward to speedy completion. To the student of medicine this garden will hold an important place with hospitals and laboratories in the study of his profession, and will form an additional and much needed center of study for the scientific world.

IS IT NOT WORTH A TRIAL?

IT is very evident that at no distant day some change must be made in the law governing the sale of intoxicating drinks. In the preparation of that law, we respectfully urge upon our law makers and law enforcers a careful consideration of the law adopted in Denmark, and rigidly enforced by the police. The police, when they find a drunken man in the streets, summon a cab, place him inside, and drive to a police station, where he is detained until he is sober. Then he is driven home, the police never leaving him till he is safe with his family. The cabman then makes his charge, the police surgeon his, the constables theirs, and this bill is presented to the proprietor of the establishment where the culprit took his last and overpowering glass. This system works well in Copenhagen. Why would it not be equally effectual in New York? It would not only be much more easily enforced than the present excise law, but also be productive of much more good. Think of it, Messrs. Commissioners, and see if it does not commend itself to your judgment.

TRUTH STRANGER THAN FICTION.

A NOVELIST who should say that a nail could be driven into a child's brain and remain there without producing any unpleasant symptoms for thirty-two years would be thought to exceed even the license of the romancer. And yet this fact was revealed in the dead house of the Metropolitan Hospital at a recent autopsy. Among the daily arrival of patients from the city was a man thirty-two years old, of fair intelligence and apparently well formed, suffering from double pneumonia. In forty-eight hours he was carried to the dead house, and in accordance to hospital

rules in all cases of sudden death, in due time a post-mortem examination was made. As the skull cap was lifted a nail was found which had passed through the skull and penetrated for three-quarters of an inch into that portion of the brain which is supposed to be the seat of thought. The head of the nail was imbedded in the skull, and covered by the scalp with its full growth of hair, showing that it had passed through the soft portions in babyhood. Inquiry into the previous history of the dead man showed that he was a laborer, had lived all his life in New York, had never suffered until the attack of pneumonia from any special disease, was of usual intelligence, and had never complained of headache, and yet during all these years he had carried this nail penetrating into the brain, the rust when removed staining the surrounding brain cells and scaling when touched with a knife from the nail itself. It was one of the strange revelations which the physician meets in the wards and the dead house of a great hospital, showing how often truth is stranger than fiction.

THE LATEST ACHIEVEMENT IN PLASTIC SURGERY.

UNDER this head we publish in our August issue an account of a recent operation at the Charing Cross Hospital, London, by M. I. Astley Bloxam, in which a new nose was made by grafting on the face one of his fingers and amputating it after it had taken root. That this operation was not new is shown by a letter received from Dr. W. E. Anthony, of Providence, in that he saw a similar operation performed in Bellevue Hospital in 1880 with entire success.

THE ACTION OF ALCOHOL ON THE CORTICAL NERVE CELLS.

THE psychological laboratories in connection with some of our scientific institutions, are doing excellent work in subjecting to scientific investigation some of the causes of disease. Prof. Welch, in the Johns Hopkins University, tried the effect of dilute ethyl alcohol upon a large number of adult rabbits. The rabbits were fed with from five to eight c.c. per day of dilute alcohol for from six months to a year. The animals gradually lost weight, and five of them died in convulsions. The brains were subjected to microscopic examination. The most important changes were found in the nuclei of the nerve cells, which were found enlarged, roughened and spongy. The lesions found in the brain cells were probably due to the irritating action of the poison on the protoplasm. That the action of the alcohol was that of an irritant, and that ethyl alcohol, the least deleterious of all the alcohol spirits, exerts a very definite and destructive effect upon the nerve cells when its use is long continued in any considerable quantity is apparent. The lighter forms of alcoholic stimulants, taken at meals and in moderate quantity, probably do not reach the brain cells in sufficient quantity to produce marked organic change, and yet a substance capable of producing so much injury upon those delicate cells which are so large a factor in the evolution of life and thought, and whose influence is so seductive, should be watched with the utmost care, and used with the same discretion we should assign to other agents capable of producing injury if pushed to extremes.

ARE MICROBES NECESSARY?—We quote the following from a London scientific contemporary: "It has long been known that many kinds of bacteria, normally present in the intestines, aid in the digestion of food, chiefly acting as ferments, altering food material into substances that can be absorbed by the cells of the intestine. Dr. J. Kijanizin, of the University of Kieff, gives in a recent number of the *Archives de Biologie*, the remarkable result of a series of investigations he has made upon the influence of sterilized air. He devised an apparatus in which small animals could be kept for a number of days, while the air they breathed and the food they ate were supplied, as far as possible, in an absolutely sterilized condition. Although it was not possible to be certain that the food contained no bacteria, it was certain that the air supplied them had been quite freed from microbes, for a geletin plate, placed in the current, remained without colonies all through the experiments. The animals were weighed before and after the experiments, and their excreta during the experiments were analyzed. Parallel experiments in which all the conditions but the sterilization were identical, were made.

"The experiments seemed to show: First, that there was a remarkable decrease in the assimilation of nitrogenous matter when the air and food were deprived of micro-organisms. No doubt the reason of the decrease was that these micro-organisms aid in the decomposition and peptonizing of the nitrogenous matter in the intestine. Were it possible to remove all the micro-organisms from the intestine before the beginning of the experiment, the author thinks that the decrease in the assimilation of nitrogen would be still greater.

"A second result was that the animals lost weight more quickly under the sterilized conditions than under normal conditions, while at the same time

the excretion of nitrogen and of carbonic acid was more than usual.

"A third result was still more remarkable. In a large number of the experiments the animals died, sometimes a few minutes, more often a few hours or a few days after the beginning of the experiment. No cause could be assigned for this. The possible causes were all excluded, and the inexplicable fact remained."

The writer of the paper does not regard even his careful and laborious experiments as "sufficient to justify the belief that microbes in the air are necessary to the life of air-breathing animals." But they certainly show that the future establishment of such a conclusion is far from impossible.

DR. I. H. NEWINGTON reports in the *Lancet* a very successful treatment for tape worm which was revealed to him in prescribing for another trouble. A patient for whom he had prescribed a mixture composed of hydriodate of potass., gr. xxxvi.; iodine, gr. xii.; water, one ounce, ten drops three times a day in water, unexpectedly passed a dead tape worm eleven yards long, of which there were no previous symptoms. The remedy has proved successful in three other cases, the last one confirming in a marked manner the specific action of the combination. The remedy was given to a patient who had suffered for two years with a tape worm, constantly passing pieces of the parasite, but failing with any treatment to get rid of the entire parasite. A short time after using the new remedy, he passed a mass of dead tape worm, and for a year there has been no return.

A PERFECT ASEPTIC SYRINGE.—That long-felt want, an aseptic syringe really deserving of the name, has now been supplied (*La Nature* tells us) by M. Mathieu, a Parisian instrument maker. The novel feature of his invention is found in the part hitherto most difficult to sterilize, viz., the piston. This is composed of ivory decalcified by a peculiar process that makes it as soft and flexible as gelatine, hence no greasing whatever is required. When dry—that is, after lying idle for a few hours—the piston shrinks, fits loosely in the glass cylinder, and only regains its proper shape and size upon being immersed in boiling water, and consequently sterilized; unless thus rendered aseptic, the syringe, of course, will not work. It has merely to be placed in cold water, and the latter to be heated to 212° F. It is unaffected by boric acid and the other antiseptics.

WATERLOGGING FROM ANÆSTHETICS —"Dr. Joseph Price says that in his own work at present shock is simply unknown. What is sometimes called shock is simply waterlogging with an anæsthetic." Commenting on this, the *Denver Medical Times* makes the rather surprising assertion that "men and women graduate from the best medical schools in the country and practice surgery, and yet never know how to give an anæsthetic. A great deal of fuss is made about histology, microscopy, etc., and yet a student may attend three years in any one of the best medical colleges in the United States, and never receive one hour's practical experience in the giving of ether or chloroform. Even the internes in the hospitals are not instructed; they are simply allowed to suffocate, overpower and fight their way as best they can.

"The fact is the operator dare hardly to offer a suggestion, the anæsthetiser is so extremely sensitive. As long as this condition of affairs continues there will be 'waterlogged patients dying from so-called shock.'"

And we add: There will be an immeasurable amount of suffering endured by the most innocent and interesting of our fellow-beings, merely because the great majority of their medical attendants have never learned practically how to employ anæsthetics in labor; and because this class of patients and this alone think it their duty to be martyrized!

WE have frequently heard of the tremendous electric power of the torpedo fish, but it has only been until the experiments of M. D'Arsonval during the past year that its electric energy has been accurately measured. It is found that a fish ten inches across gives an electric current of two to ten amperes, with a difference of potential energy of fifteen to twenty volts, capable of lighting an incandescent lamp of ten candles. If the fish is attacked, it betrays its feelings so violently that the carbon filament flies off into vapor. The electric energy of the torpedo is found by M. D'Arsonval to be developed by a special muscle, which instinctively or deliberately gives electric instead of mechanical energy.

TO the medical profession who propose visiting Atlanta during the "Cotton States International Exposition," Dr. George Brown, with characteristic Southern hospitality, extends a cordial invitation to make his office their headquarters. Any letters of inquiry—of course, containing postage—will be promptly answered, and rooms engaged without commission.

FOUNTAIN TREE.—On the Canary Islands grows a fountain tree. It is said that the leaves constantly distill water enough to furnish drink to every living creature in Hiero, Nature having provided this remedy for the drought of the island. Every morning near this part of the island a cloud of mist arises from the sea, which the winds force against the steep cliff on which the tree grows, and it is from this mist the tree distills the water.

BIBLIOGRAPHICAL.

The November issue of the *Century* will contain the first installment of Mrs. Humphrey Ward's novel, upon which she has been engaged the past two years. The novel is called Sir George Tessady, and is said to surpass, from a literary standpoint, Robert Elsmere.

A MANUAL OF ELECTRO THERAPEUTICS FOR STUDENTS AND GENERAL PRACTITIONERS. By C. T. Hood, A. M., M. D. Gross & Delbridge Company, Chicago, 1895.

This interesting book has just been received, and will be carefully reviewed in a subsequent issue.

TWENTIETH CENTURY PRACTICE. An International Encyclopædia of Modern Science. By Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D., New York City. In Twenty Volumes. Volume III., Occupation Diseases, Drug Habits and Poisons. New York: William Wood & Co. 1895.

The third volume of the "Twentieth Century Practice" is fully equal, if not superior, to the preceding ones. The opening article, by Dr. Norman Kerr, of London, upon alcoholism and the drug habits, is 134 pages in length, and is in his best vein. The author, in discussing his subject, pursues a different line from that followed in his celebrated work on inebriety or narcomania by treating each drug in the list of narcotics and active stimulants separately, clearly defining the peculiarity of each and the treatment. This list includes the toxic effects of articles taken to excess, with the etiology and pathology of alcoholism, morphinism, cannabism, chloralism, chloroformism, etherism, cocainism, gilsemium, sulfenol, paraldehyde, antipyine, arsenic, tobaccoism, theism, periodical inebriety, constant inebriety, medico-legal relations, etc. From a temperance standpoint the argument is stated fairly and from a judicial position, and from its candor will have great weight with the profession.

Dr. Shrady's article upon shock and collapse discusses with much skill and learning a subject but very little understood by the profession. The article will be warmly appreciated for the information it contains, and the logical manner in which the subject is handled. In the discussion of seasickness Dr. Albert L. Gihon brings the ample experience of a surgeon of the U. S. Navy of forty years' standing and says: During all this experience on naval and passenger vessels, in which he has been tossed on every sea and passed through some of the most terrible hurricanes and typhoons ever encountered, he has never met a fatal case, nor one in which death might probably occur later. Dr. Gihon notes the remedies usually given in the trouble, but adds but little to the general information in the profession upon the subject. Dr. Gihon also gives a very excellent article upon heat strokes and frost bite. Both are handled from the standpoint of the actual experience of one who has for nearly half a century in his journeyings in every climate been exposed to every variety of temperature.

The article on mountain sickness will be of special interest to the States included in mountain ranges and along the Pacific Coast.

Dr. Lloyd's article on diseases of occupations is 186 pages in length, and is one of the most scientific and practical works which has ever appeared. The article contains so much information, given in so clear a manner, that we should be glad to see it published in a separate form for a more extensive circulation among others that the medical profession. The articles on vegetable and mineral poisons, by Dr. Small and Dr. Stewart, present the latest facts upon the subjects discussed.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

BIOLOGICAL SOCIETY.

M. Chauveau, President.

MM. Hannot and Leopold Levé reported an observation of tubercle of the internal membrane of the aorta. The endarteritis of the small arteries connected with tuberculosis, has been observed in the ganglia, the lungs and the meninges, but has not been met with in the internal membrane of the large arteries nor the aorta. In the case of a man of sixty-one years who had died of gravel, the authors found, upon the upper part of the thoracic aorta, a tubercle with Koch's bacilli and giant cells, which was developed in the sub-endothelial membrane.

M. Laborde, of Bordeaux, addressed a note upon the consumption of maltose by a new agent, the "Eurotropsis gayosi," which consumes directly the sugar without transforming it into glucose, and this property of causing direct fermentation of the maltose must be attributed to a soluble ferment, the maltose of Bourguelot.

M. Nepreu, of Marseilles, reported the presence of indol and indican in the tissues of ulcerated or non-ulcerated tumors. He observed it in three non-ulcerated cancers of the breast, in ulcerated epithelioma of the uterus, and finally in one case of hepatic carcinoma. Indican has often been found in the urine of carcinomatous cases.

M. Bouret inoculated two dogs—one of them healthy, the other affected with spontaneous cancer of the abdominal walls—with the fluid of encephaloid cancer. The injection was intra-venous, and the cancerous dog died in a few moments afterwards, while the other continued well.

M. Marinesco presented a case of acromegalia, with hemianesthesia and diabetes mellitus. It occurred in a woman of thirty years, who showed all the signs of the disease of Marie, with all the peculiarities above mentioned. M. Marinesco remarked that the diabetes and the acromegalia seemed both to be connected with the functional disturbance of an internal secretory gland.

MM. Bar and Renon discovered the bacillus of Koch in the blood of the fœtus. They experimented in the following manner: The placental blood flowing from a section of the umbilical vein was received and immediately injected under the skin of guinea pigs. Five experiments were made, of which only two gave positive results, and in these two cases the mothers were affected with tuberculosis in the third degree, and with both lungs cavernous.

M. Mazer inoculated rabbits with the virus of the bacillus pyocyanicus, and with different serums of this virus. He proved that the serums, which might be called artificial, those coming from the vaccinated animals, impeded the progress of the infection, while those gathered from the diseased, especially if uremic, acted as veritable toxines, and aggravated the infection.

M. D'Arsonval investigated the antiseptic power attributed to ozone, and concluded that this gas does not possess the marked microbicidal properties that have been claimed for it.

ACADEMY OF MEDICINE.

President, M. Empis.

The Diagnosis of Diphtheria.—M. Dieulafoy, in an interesting discussion, reported five new cases taken from

MM. Kelsch, Huchard and Brocq. Gongenheim, Bronx and Martin, showing that the anginæ which present all the clinical characters of angina herpetica are in reality anginæ of diphtheria, and often of a grave character. Trousseau had already indicated this possible confusion. Gubler, in speaking of the paralysis consecutive upon herpetic angina, had also announced the same, but without knowing how to avoid it. Laséque proposed for these deceptive forms the name of diphtheroid angina. Gillette, during the diphtheria of which he died, believed to the last that he suffered from herpetic angina. The whiteness and the configuration of the false membranes, the redness of the throat, the acute pains he experienced, seemed to him signs that were absolutely assuring and demonstrative. Bacteriology has come to remove all this confusion, to show that many of the anginæ of diphtheritic aspect are benign. Of 159 cases related by W. Hallock Park, 89 were non-diphtheritic. A clinic that can only give speculations must give way before the precise facts of bacteriology, and an opportunity for their practical proofs should be created by the School of Pharmacy.

M. Planchon replied that the school was now engaged in establishing the necessary institution.

M. Laudauzy will communicate statistics to show the absolute necessity for the bacteriological examination of false membranes.

The Action of Digitalis Upon the Heart.—M. Frank stated (1) that the action of digitalis affected primarily the cardiac muscular fiber. (2) The action is equal upon the right and left side. (3) The drug effects occurred in the following order: Excessive depression of the pulse, secondary acceleration with intermitting irregularity, death of the heart, which is arrested in its systole, and not its diastole. Fatal doses of digitaline per kilogramme are very variable, and according to the preparation of digitalis. M. Nicoise read in M. Delbet's name a paper showing that in the hemotherapic treatment of lymphadenoma the natural blood should be employed instead of serum. In order to prevent rapid coagulation it was sufficient to precipitate the salts of lime with a solution of the fluoride of sodium, two in 1,000, or with a solution of the alkaline oxalates, one in 1,000, so all the immunizing principles of the blood of the animal are injected. M. Delbet does not exceed eight grains in each injection.

Alcoholic Injections Into the Blood.—M. Grehaut showed that after the injection of a considerable volume of alcohol into the blood, the alcohol remains fixed for a time in the tissues; it is afterwards eliminated by the lungs, the skin and kidneys. After five minutes, and during more than eight hours, the quantity of alcohol contained in the blood continues constant. At the end of twenty-four hours, the expired air contains no trace of the alcohol. Glucose, on the contrary, instead of remaining for a long time in the blood in constant proportion, diminishes with very great rapidity.

SOCIETY OF THE HOSPITALS.

M. Galliard related the case of a woman of forty years, attacked with thyroiditis following grip, which disappeared quickly under the use of an ointment of belladonna and a few doses of antipyrine.

Seborrheic Eczema of the Face.—M. Le Gendre presented a child of five or six months affected with the above disease. At first, the affection was attributed to the effect of the milk of the nurse, who was addicted to drinking, for the health of the child was perfect. Notwithstanding the change of two nurses, and injections of serum, advised by M. Hutinel, the child declined and died in three days with evidences of infection. It is probable that towards the last, the saliva of the child had become infected, for the second nurse had an abscess of the breast and other congestions that terminated by resolution.

Raynaud's Disease and Scleroderma.—M. Chauffard reported an observation of a patient affording a good example of the relations, clinically and pathologically, which unite the disease of Raynaud with scleroderma. The disease began with the concomitant symptoms of Raynaud, the subsequent morbid evolution being that of the scleroderma. The second interesting fact is the lingual localization and the predominance of the unilateral indications. There is lingual hemiatrophy—myelopathic. The thyroid treatment gave good results.

Nervous Diseases at Athens.—Dr. Paulinès observed certain nervous disorders occurring at Athens. 1st. Two cases of rhythmic chorea, one, a woman, aged eighteen years, who had had two children, nothing specially interesting from a hereditary point of view, had never been sick, remembered that when pregnant for one month she had aborted, and was obliged to keep her bed for one month. Four months later there appeared, without appreciable cause, involuntary movements of the right leg, continuing during rest, and only ceasing while asleep. Since a year, and upon the occurrence of a new pregnancy, the movements have increased and involved the left leg, so as to make walking very difficult. On one occasion, being in bed, she got up suddenly to open the door, but had scarcely put her feet on the floor, when she lost consciousness and fell. Walking became completely impossible, and while sitting the limbs move up and down as when working a sewing machine. The sensation of taste is entirely lost, the patient not perceiving quinine when placed upon the tongue, and there is total anæsthesia of the left side, abolition of the pharyngeal reflex, and diminution of visual power.

Second case was that of a woman of twenty-three years, married, health good; her mother had been of a nervous temperament. One month after marriage was taken with involuntary movements of the arms and head; shoulders elevated and depressed alternately, and head turned from right to left rhythmically, describing a quarter of a circle. It should be remarked that the rotation of the head occurred when she depressed the shoulders. The movements continued regularly and incessantly during sleep, and hysterical astigmatism, with diminution of the field of vision, and anæsthesia of the right side of the body, completed the pathological picture. Patient had never had hysterical attacks. These two cases represented a combination of rhythmic chorea and hysteria.

Third. A case of astasi abasia—inability to stand still or remain sitting—occurring in a hysterical woman as a result of the earthquakes in Greece. She was twenty-five years old, unmarried, nothing special in her antecedents to account for her disease. Had typhoid fever in her tenth year. At fifteen hysterical attacks supervened, lasted until she was twenty, then disappeared. After the earthquake, hysterical attacks reappeared, more frequent and more violent. One morning, on awakening, she found herself unable to walk or remain quiet, so was obliged to keep her bed. There was hysterical astigmatism and complete anæsthesia of the left side, to puncture, pressure, or heat or cold. On the anæsthesic side and on the right side also, there were small hyperæsthesic regions, very painful at times. Taste and smell nearly abolished. Sense of sight, especially of the left eye, diminished. Coördinated movements preserved when in bed, and ability to perform them of all kinds. 4th. In this case of pure hysteria in a girl of fifteen, there was no hereditary taint. Had a continued fever two months before the attack, fifteen days in bed, furred tongue, constipation, slight headache, temperature 37 degrees, no diarrhœa, delirium nor eruption. The case seems worthy to be recorded from the simple fact that there was no hereditary taint, and that the hysteria supervened upon the conclusion of an infectious disease. Were these the relation of cause and effect?

BIOLOGICAL SOCIETY.

President, M. Fere.

M. Charrin insisted upon the influence of the ports of entry, not only upon the active virus, but upon the bacterial secretions. For many years he has remarked that if sterilized pyocyanic toxines are introduced into the digestive tube, the results are insignificant. On the contrary, the introduction into the circulation of the most minute quantity of the same toxines, will provoke an intense enteritis, with congestions, hemorrhages and ulcerations of the intestinal walls. The virulence depends upon the avenue of penetration. These facts, to which M. Charrin has recurred on several occasions, have been verified by different authors in relation to the toxines of diphtheria, typhoid fever and cholera. He has extended his observa-

tions to the secretions of the bacillus of tetanus and the bacillus coli. Finally, he concludes that the port of entry greatly influences the toxicity of the majority of the microbic products, and these facts prove, moreover, that the organism is protected in a natural manner against toxines, and eliminates the poisons by a diarrhœal flux. It may also be accepted that the intestinal disturbances that arise from the intravascular penetration of the toxines, together with the diarrhœa results, are due to an impression having been made upon the vaso-motor centers; that the toxines act directly upon the vaso-motor centers. M. Luys has proved the existence of bundles of fibers uniting the cerebral cortex with the corpora olivaria, and continued on into the medulla. Physiology confirms the anatomical existence of these fibers for, in an individual who stammered, M. Luys observed a marked atrophy of the olivary bodies.

The Bacillus of Grip.—M. Trouillet, of Grenoble, has been engaged in conducting a series of experiments in the bacteriological laboratory of the "Ecole de Medicine," of Grenoble, whose object was to determine the pathogenic agent of grip, and has arrived at the conclusion that this affection is due to a special micro-organism that presents itself in the form of a diplococcus, a bacillus or a streptobacillus. It is easy to cultivate this microbe; an injection of one or two cubic centimeters of the culture determines, in the rabbit, symptoms analogous to those of grip.

ACADEMY OF MEDICINE.

Actinomycosis.—M. Meurier presented three new cases of actinomycosis which at first were taken for dental abscesses. The microscope alone rectified the diagnosis, and the iodide of potassium produced a rapid cure of the local lesions, which, in one of the cases, were of a serious character. The efficacy of the iodide treatment should recommend it to professional attention.

Disorganization of the Vitreous Body.—M. Abadie reported a case of disorganization of the two vitreous bodies by intra-ocular hemorrhage produced by violent rage. Electrolysis of the left body, made by a fine needle of iridiated platinum, the positive pole intra-ocular, the negative upon the arm, intensity three to four milliamperes, continued for five minutes, produced a marked amelioration on the next day, which progressed favorably for a month, the patient being able to walk alone and read the names of the streets. The right eye, which was not treated, remained absolutely blind. A second patient, treated in the same way, was entirely cured.

MEDICAL SOCIETY OF THE HOSPITALS.

MM. Moizard and Bouchard reported a case of non-diphtheritic angina, treated by the serum; fatal termination. A girl of six years, whose sister was cured by anti-diphtheritic injections, was taken with throat trouble and amygdalitis. Fearing diphtheria, ten c.c. of serum were injected. After a few days the condition seemed improved, but the temperature increased and an urticarial eruption appeared at the point of injection, which rapidly spread, convulsions supervened and death followed in four hours. This was an example of the action of the serum upon the central nervous system. To speak of such accidents as this one, is not to attack the admirable work of Behring and of Roux.

M. Gaucher said: "I believe that all these facts prove that the pathogenesis and clinical study of diphtheria are more and more investigated. Is this disease entirely the work of the bacillus of Loeffler? There are mild anginæ in which we find it, and others more grave in which it is deficient; are not these last diphtheria?"

M. Chauffard presented a case of acromegalia with macroglossia; it was this last syptom that verified the diagnosis. There were also prognathus, cervico-dorsal cyphosis and dorso-lumbar lordosis, hypertrophy of the penis, atrophy of the testicles, occipital boss protuberant, persistent headache and ocular troubles sufficient to produce blindness of the right eye.

M. Rendu thought M. Chaufford's diagnosis exact, and related the case of an old man in whom the increase of the occipital boss and prognathism joined to persistent headache caused M. Raymond to diagnose acromegalia from the beginning. The presence of ocular troubles, when they exist, may also facilitate the diagnosis.

MM. Gaucher and Gallois cited a case of pellagra followed by autopsy. Atrophy of the organs was the prominent condition. There were ulcerations of the intestine about two centimetres long near Pyer's patches; liver yellow, soft, pale and small. MM. Gaucher and Sergeant examined the parts; bacteriological researches negative. The principal lesions were in the digestive tube, viz., hyperæmia of the whole, interstitial gastritis and ulcerative enteritis; fatty degeneracy of whole liver. Finally, the medulla showed lesions similar to those described by Marie. M Gaillard related case of acute articular rheumatism following serum-therapy in a woman of thirty-three years. Neither she nor her parents had ever had rheumatism. She had a suspected vaginitis, but her rheumatism had not the characteristics of blennorrhagic rheumatism.

SURGICAL SOCIETY.

Appendicitis.—M. Tuffier protested that there should be found among physicians, partisans of temporization in this affection. It is necessary when one has to do with an appendicitis, to operate always, and as soon as possible. The extreme gravity of the case is no contra-indication, and the surgeon should follow the same line of conduct as in strangulated hernia. He described the distant abscesses that are met with in the course of the operation—abscess of the sheath of the rectus abdominis muscle, abscess over the Ziphoid appendix—said they were of colibacillar origin.

M. Brun was also entirely opposed to delay. Most generally patients succumb, not from ordinary peritonitis, but from a veritable septicæmia. He described perivesical abscesses, and in one case one of the abscesses perforated the bladder and peritoneal cavity. M. Routier was another supporter of immediate surgical intervention. The quieting of pain and suffering is deceiving. He criticised M. Monod's conduct, who, when he did not find the offending purulent collection, left a drain and pretended that when it escaped by this means, the surgeon would then have a great opportunity. He—Routier—preferred to look for the abscess by separating the intestinal folds with sterilized napkins, a method which he considers harmless. M. Quénu divided appendicitis into two classes. In the first, there is infection, which is dangerous, without peritoneal exudation. It is a veritable septicæmia, and all therapeutic intervention is useless. The patient will die. Again, there is an infection which causes peritonitis with pus, and there is a possibility of success by laparotomy. In certain cases, the infection forms only a local purulent accumulation, and the seat of the infected peritoneum presents only the signs of adhesive peritonitis. Such cases give the most successful surgical results. Appendicites of the second class are those without peritoneal infection. They are acute, sub-acute, or chronic. The operation generally gives good results, but M. Quénn vehemently protests against the adoption of an absolute rule. To say to physicians that they should always operate, it would be necessary to be able to affirm that they would not leave their patients in a more dangerous condition than before, and this, no one could affirm. He did not agree with M. Routier in his judgment of the conduct of M. Monod. It was the method he himself had always adopted, and its effects had always been favorable.

Ozone in Whooping Cough.—Whooping cough being evidently a microbic affection, it is natural to try the effect of ozone in this malady. Twenty-two observations of children attacked with whooping-cough, and treated exclusively by inhalations of ozone, produced an immediate amelioration in nearly every one. The violent paroxysms of coughing were speedily modified, not only in frequency, but in intensity and duration. The respiratory agony and the cyanosis became almost entirely subdued, and the vomiting, the usual reflex consequence of the intensity of the spasmodic attack, disappeared. There was improvement in the general condition, and the children recovered their appetite and previous playfulness. None of them had broncho-pulmonary complications, so often seen and justly feared in this disease. In conclusion, it may be said that the inhalations of ozone in whooping cough act, First, in diminishing very rapidly

the duration, intensity, and number of spasmodic attacks. Second, by modifying the general condition of the little patient.

Third. The ozone in whooping-cough seems to act, above all, by its antiseptic power.

Treatment of Chronic Otitis by Periodical Electric Currents.—The first effect of every inflammation of the middle ear is to render the Eustachian tube impermeable. The equilibrium of internal and external pressure is necessarily broken, which produces a diminution of the external concavity of the membrane of the tympanum. The tensor muscles of this membrane are then immovable and slightly drawn, which causes them to cease to respond to nervous stimulation. The employment of electricity is then indicated, but the continuous currents are contra-indicated, because of their electrolytic action, and the troubles that may grow out of them. Alternating currents are often powerless and always very painful. It is not so with the periodical currents. These currents, at a very elevated tension and very feeble intensity, present all the advantages of continuous currents without their inconveniences. My conclusions, then, are: 1. To employ electricity in the treatment of otitis of the middle ear, soon after the acute period; 2. Continuous currents are contra-indicated; 3 Alternating currents are often powerless; 4. Periodical currents have all the advantages of continuous currents, without any of the inconveniences, and are therefore especially indicated. J. A. C.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York.

Obstruction of the Bowel Treated by Electricity.—Althaus (*Brit. Med. Jour.*) relates a case in which the patient for three months had suffered with obstinate constipation. At the time of coming under observation the bowels had not been moved for ten days, and the abdomen was distended and tender. The appetite was lost, and a condition of collapse existed, with sunken face and small, feeble pulse. The introduction of the long tube proved unavailing, and electric treatment was resorted to. An insulated sound, with a fine metallic end, was introduced into the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary Faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared quite well.

A second case, in a woman fifty-seven years old, is cited, in which a like result was obtained from similar treatment.

Strychnine in Weak Labor Pains.—Duff (*Wien. Med Presse*, No. 35, 1894) has obtained excellent results with strychnine as a prophylactic remedy in weakness of the uterine contractions attending parturition. When there is a general debility, or a history of post partum hemorrhage, or of feeble uterine power, he begins to administer strychnine six to eight weeks before the expected time of parturition. Up to the last week the dose prescribed is about one-sixty-fourth of a grain, thrice daily. During the last week this amount is increased to one-fortieth of a grain.

Sulphur as a Cure for Dandruff.—A physician thus gives his experience in the *Louisville Medical Monthly* (*Practical Medicine*): Having suffered much inconvenience from dandruff, and having resorted to many advertised nostrums and other means for relief, I was finally induced, from my knowledge of the frequent efficacy of sulphur in certain cutaneous affections, to try a preparation of an ounce of the flowers of sulphur in a quart of water, as follows, with the happiest result: the sulphur was repeatedly agitated in the water during intervals of a few hours, and the clear liquid then poured off, with which the head was saturated every morning. In a few weeks every trace of dandruff had disappeared, and the hair became soft and glossy. After discontinuing the treatment for eighteen months, there is no return of the disease.

Treatment of Hiccough by Compression of the Phrenic Nerve.—At one of the last meetings of the Academy of Sciences, in Paris (*Therap. Rev.*) M. Leloir, of Lille, made known a method of arresting hiccough. He said that five years ago he was called to attend a little girl not over twelve years old, who had been suffering from constant hiccough for over a year, at intervals of half a minute. They occurred in her sleep as well as when she was awake, and seriously affected her health. Anti-spasmodics were useless. He thought of pressing the right phrenic nerve between the sternal and clavicular origins of the sterno-cleido-mastoid muscle. This pressure, which was painful, lasted about ten minutes, when the hiccough ceased and never reappeared.

In many cases of an obstinate nature this means has been equally successful after other methods had failed, by pressing a few minutes, sometimes only a few seconds. Leloir considered this an interesting application of the principle involved in the investigation of Vulpian, Charcot and Brown-Sequard, on the therapeutic action of excitation of the peripheric nerves.

Rest in Cardiac Affections.—Dr. T. Lauder Brunton (*The Practitioner*) believes that as a remedial measure rest frequently requires to be absolute. As a preventive one it may be relative. The amount enjoined must be carefully proportioned to each case, as in advanced mitral disease, when the power of the heart is failing, absolute rest gives satisfactory results, in that the circulation recovers its balance the arteries become filled and the veins emptied, the dropsical effusion and venous engorgement of the organs disappear, and the patient recovers a fair amount of health. In cases of mitral disease incompetence may come about from:

1. Enlargement of the auriculo-ventricular orifice.
2. Thickening of the valves, or
3. Inco-ordinated action of the musculi papillares.

In the first case it may be hard to say if this be the sole cause of the regurgitation, without any obvious disease of the valves, as some disturbance of the relationship between the musculi papillares may tend to aid the regurgitation. In such hearts in growing boys and in chlorotic girls comparative rest may be useful, and sometimes absolute rest may be almost essential. In some cases the former may be all that is wanted as a prophylactic measure. In chlorotic girls gentle exercise is advisable, but it must be carefully graduated, as exhaustion is likely to do harm. Massage may be useful, as it gives the patient exercise without putting any strain upon the heart. With a fatty heart gentle exercise may be advisable, as it may be more likely to bring about a healthy condition of the heart than absolute rest. When in mitral disease cardiac tonics, even pushed to their utmost limit, fail to give relief, then absolute rest becomes of great importance. Massage is of great usefulness in clearing out the body-waste, quickening the flow of blood through the muscles and relieving the œdema, and the patient gets the advantage of the exercise without overdoing his heart. It also allows the treatment to be carried out more easily than it would otherwise be, for it removes the feeling of weariness and irritability, faintness and unrest of the patient.

Bone Marrow in Anæmia.—Dr Dixon recommends bone-marrow extract in the treatment of anæmia. It being assumed that the red marrow of bone was probably the chief agent in promoting the development of red-blood corpuscles, it seemed feasible to suppose that an extract of this substance, if introduced into the anæmic human organism, might act as a stimulant to the formative process and increase the rate of production of the red corpuscles. As the tissue-forming power in young animals

is more active than in older animals, the bones of the former are preferable as a source of marrow extract. To prepare the extract, the heads of the long bones obtained from recently killed animals are broken into pieces and digested in glycerine, with frequent agitation, when the extraction is complete After several days the extract is filtered off and is ready for use It is red or reddish-brown in color. and is devoid of any unpleasant taste or odor. It may be given in teaspoonful doses once or twice a day, either out of the spoon or spread between thin pieces of bread In several cases of pronounced anæmia a marvelous improvement, coincident with an increase of red corpuscles, has been observed under this treatment.

Transmission of Tuberculosis by a Brass Horn.—Dr. Addison S. Thayer reports (*Jour. Med. and Science*), the cases of three young men whose family history was good, and who were themselves physically sound, who became infected with tuberculosis by using, as members of a brass band, a second hand horn hired from a dealer. The possibility of tubercle bacilli being deposited in the convolutions of a horn to the danger of subsequent players cannot be denied. The three users of the horn in question were the only members of the band who did use it. Two of them are now in Colorado and one in Southern Pines under climatic treatment for tuberculosis.

New Theory of Sea-Sickness.—The most generally accepted theory of the causation of sea-sickness is that which attributes it to an influence on the circulation of the cerebral cortex produced by the oscillation of the ship, thus accounting for the gastric symptoms. This will not, however, explain all cases of naupathia. Rubenstein (*Rev. Int. Med. et Chir.*) has often observed that symptoms of *mal-de-mer*—for instance, paleness of the face, and especially of the lips—develop in some persons when the sea is calm and the vessel moves without oscillation. In these cases, he concludes that the cause of the malady is the irritation of the retina, caused by the solar rays reflected from the water. This irritation, transmitted to the brain, provokes the well-known symptoms. It is, therefore, well not to look at the water. *Mal-de-mer* is observed also in snow fields, on the sands of the desert and of the sea shore. Under these conditions, gray or blue spectacles afford relief. The author observed a hysterical female who had retinal hyperesthesia, and on sunny days experienced scintillations, nausea and vomiting. These symptoms were not produced if the back was turned to the sun. This hypothesis explains why the most nervous and hysterical women are most subject to naupathia. Rubenstein calls the attention of ship's surgeons to this observation.

Europhen in Minor Surgery.—As an antiseptic and cicatrisant in cases of minor surgery, europhen has been favorably commented upon by a large number of authors, and Dr. Doermer has recently added his testimony as to its value as serviceable remedy to the general practitioner. As he has had occasion to employ it in over eighty cases his observations are entitled to more than ordinary consideration. Extensive use was made of europhen in the form of the powder in cases of fistulas after extirpation of glands, fresh incised wounds, abrasions of the skin, abscesses, ulcers of the leg. In the form of a three per cent. ointment it was used in the treatment of contusions, burns, glandular enlargements, and in the after treatment of operation wounds. In combination with boric acid 1 to 3 it was employed in middle ear catarrhs and ulcers of the leg, and as 5 to 10 per cent. gauze in all kinds of recent wounds, abscesses, furnucles and carbuncles, phlegmons, glandular suppuration, etc. In all these cases the author had formerly been in the habit of using iodoform, and he found it difficult to discard this long-tried remedy and resort to another. The results of his change, however, were highly satisfactory. In almost all the cases he was able to completely dispense with iodoform, and never observed eczema or other cutaneous eruptions during the use of europhen. The fact that the latter remedy is devoid of the penetrating odor of iodoform is also greatly in its favor, while symptoms of poisoning were never observed even when it was employed in large quantities. The good qualities of europhen are that it forms an adhesive covering over wounds, and that it exerts an antiseptic influence, due to the liberation of iodine. Of course, a few instances occurred in which suppuration of wounds was not arrested under the use of europhen, but this happens frequently under the iodoform treatment. The application of a 5 to 10 per cent. europhen gauze appeared to be the most serviceable dressing for wounds, both fresh and suppurating. The powder also proved very effective in cases of markedly secreting wounds; and in ulcers of the leg, europhen exerted an actually specific influence, and produced healing much more rapidly than under all forms of other treatment. In cases where iodoform gave rise to irritation of the skin, in this class of cases europhen proved extremely serviceable, applied pure or mixed with boric acid 1 to 3. Inasmuch as it produces rapid healing in cases of fistula resulting from extirpation of the glands and other scrofulous or tuberculous foci, Doermer suggests the use of emulsions of europhen with glycerine, ether or alcohol for the treatment of cold abscesses or tuberculous diseases of the joints. Among all the above-mentioned diseases he is unable to find one in which the remedy proved an absolute failure, and hence he considers himself warranted in counting it among the most valuable additions to the materia medica.

Water in the Treatment of Neuralgia.—According to the *Charlotte Medical Journal*, Dr. Buxbaum first called the attention of the profession to this mode of treating neuralgia. He thinks that the hydrotherapeutic treatment of this disease has hardly received the attention which it deserves. In neuralgia of rheumatic origin it acts by inducing increased blood supply to the affected parts, and in the neuralgias following upon infective diseases or due to intoxication by mercury or lead, it promotes the elimination of the poison.

He reports that in eighty-three typical cases of neuralgia this treatment was unsuccessful only in 10 per cent., whereas 60 per cent. were cured, and the remainder considerably relieved. The alternate application of heat and cold is most to be recommended. The patient is exposed to high temperatures, and afterwards cold applications are made. The alternating Scotch douche is particularly of service. Recent neuralgias may often be cut short in this way. Patients with sciatica treated without effect by various therapeutic measures, even including nerve stretching, have been cured in a short time by this method. If the neuralgia persists it is nearly always due to some irremediable cause, with the exception of some few cases open to operation. If a remission occurs after the treatment has begun, it shows the neuralgia is curable, and is therefore of prognostic value. In trigeminal neuralgia hydrotherapeutic measures applied to the whole body are the most suitable. Of course other indications should be attended to, such as anæmia, malaria, etc.

Lactic Acid in the Treatment of Ulcers of the Cornea.—A Russian physician, Dr. Dolgenkow, employs for cauterization of ulcers of the cornea a 50 per cent. lactic acid solution, applying it with a small wooden staff, the ends of which are pointed. The ulcer, on being treated in this way, is covered with a whitish crust. When this crust is detached within three or four days, the ulcerative surface below is found to be in a fair way of cicatrization. The healthy portions of the cornea, which may be touched with the acid, also whiten, but only temporarily, the lesion in this case affecting only the epithelium, which is regenerated with such rapidity that in twenty-four hours no trace remains of the effects of the caustic.

The therapeutical results obtained by Dr. Dolgenkow from the use of lactic acid in the treatment of ulceration of the cornea were excellent, except in cases of too extensive loss of substance, that is to say, in cases of infective ulcers occupying over one-half of the cornea. In a case of inveterate trachomatous ulcerations, accompanied by photophobia and intense pericorneal congestion, a single cauterization with lactic acid sufficed to enable the patient on the following day to bear the light, to suppress all pain and to cause the hyperæmia to disappear almost completely. In six cases of annular ulcer of the cornea, an affection which is extremely dangerous to the eye, the progressive course of the keratitis was checked by a single application of lactic acid.

Massage in the Treatment of Scorbutus.—A Russian physician, Dr. Afanassiew, accidentally discovered that massage produced excellent results in a case of scorbutus, in a patient who had his legs rubbed systematically for the relief of the severe pain from which he suffered, with the result that both the pain and the scorbutic œdema to which it was due, subsided. Since that time Dr. Afanassiew, in every case of œdema which he is called upon to treat, never fails to have recourse to local massage of the edematous regions, in connection with general massage and hydrotherapy. This treatment not only suppresses the œdema and relieves the pain and other subjective trouble accompanying it, but also assists convalescence, so that recovery takes place much more rapidly than with any other means hitherto employed for the treatment of scorbutus.

RETROSPECTIVE DIETETICS.

Meat Juice in Disease.—*Practical Medicine* says that Professor V. Ziemssen speaks very highly of freshly expressed meat juice as a food in disease. Patients who find the bloody taste repugnant may easily have this disguised by adding a little brandy and extract of vanilla with sugar, and upon freezing it an agreeable ice-cream is formed, which is eaten by the most fastidious with pleasure. In this manner administered, there will be no difficulty in giving a patient at least 200 grammes (℥ vjss.) of the juice, and, indeed, even to those patients who have a disgust for all other forms of food, or who cannot retain food, as typhoid cases.

Diet in Diabetes.—Schmitz (*D. Med. Wochenschr.; Charlotte Med. Journal*) insists that in the severe forms of diabetes, when the patients are much reduced and the proportion of sugar in the urine continues to be high in spite of exclusive albuminoid and fat diet, it is better to almost exclude meat from the diet list and give in its place more fat and a moderate amount of carbohydrates. He gives several histories of cases where the patients had been reduced to mere skeletons on the ordinary anti-diabetic diet. This had at first helped, but later had failed altogether to keep down the high per cent. of sugar in the urine. By giving much less albumen and more starch and fat, the amount of sugar in the urine was in a few weeks reduced from five per cent. and more to less than one per cent. in some cases, with decided improvement in general health.

White of Egg in Typhoid.—The *Provincial Medical Journal* remarks, *apropos* of Dr. Da Costa's opinion that the exclusive milk diet is a source of mischief rather than good: "It has on several occasions been pointed out that whenever curd can be seen in the motions, too much milk is being given, and it may even indicate that it is not being digested at all. It is best replaced by white of egg, beaten up and largely diluted with water. In this way can be introduced any requisite amount of real food, and in the blandest and most readily digestible form. It leaves no solid residue, and can cause neither diarrhœa nor gaseous distention."

Feeding in Delirium Tremens.—According to the *Medical World*, Dr. Da Costa says that in ordinary cases of delirium tremens the patient will generally be able to retain food if large quantities of red pepper be added to it.

Heart Surgery Next!—A contributor to the *Medical News* suggests (*Sanitary Era*) that the principles upon which wounds in other vital organs are dealt with by modern surgeons might often be applied with equal success to the heart. In view of cases on record in which the heart has resisted the effect of gunshot and other wounds for hours, and even days, it is at least open to discussion whether a surgeon might not open the pericardium, clean out the clots, and close the wound in the heart wall, with a chance for the patient of recovery which certainly could not be lessened by the attempt. It is claimed that this is no more improbable now than the safe removal of a tumor from the motor area of the brain seemed to be in the recent past. That the application of sutures would necessarily stop the action of the heart is not proved, and if it should be, there would remain a question of possibly starting it again. The danger from the entrance of air into the circulation has been not so great as has been supposed. Drs. Hare and De Schweinitz, of Philadelphia, who have done so much work along the line of experimental cardaic surgery, have demonstrated that the intravenous injection of large quantities of air is not necessarily fatal.

To Disinfect Sewers, Water-Closets, etc.—In the *Raccoglitore Medico*, No. 10, 1893, the following means of disinfecting sewers, drains, water-closets, etc., is recommended: Prepare as much quicklime as desired, break it into small pieces and place it in liquid carbolic acid for a quarter of an hour, and preserve in a tightly closed vessel. To disinfect a sewer, throw into it a few of these pieces, which will absord dampness and send forth any quantity of vapor impregnated with carbolic acid, which will penetrate all through the sewer and disinfect perfectly. Repeat twice a day.

Influence of Tobacco on Microbes.—M. Tussau recently reported (*Lyon Med.; Mod. Med.*) three cases of tuberculosis of the tonsils, in all of which the patient had been addicted to the very free use of both alcohol and tobacco. The reporter expressed the opinion that the use of alcohol and tobacco is a predisposing cause of tuberculous infection of the tonsils. In one case, in which the disease was cured by thorough cauterization of the tonsils, the patient, an innkeeper, remained well for some little time, but on resuming his bad habits was again attacked by tuberculosis, and died of the disease, which became general.

In still another case, the local disease was cured, but the patient, a soldier, continued his bad habits, and a few months later died from a return of the malady. These observations afford the best possible evidence against the theory that tobacco is in any way advantageous as a germicide. Of all the various pathogenic microbes which attack the body, those of tuberculosis are perhaps the most easily destroyed, yet the antiseptic quality of tobacco, even when used to a great excess, as in the cases reported by M. Tusseau, has no influence whatever in preventing their development in the mouth, but actually encouraged the growth by producing an irritated and inflamed condition of the tonsils.

Progressive Apoplexy.—Dr. H. N. Moyer concludes (*Med. Fortnightly*) that in rare cases a single large cerebral hemorrhage may develop gradually, extending over some days (progressive apoplexy). This is distinct from that form of hemorrhage which occurs suddenly, to be followed soon by a second or third attack (recurrent apoplexy). Progressive apoplexy of the internal capsule may be easily mistaken for a rapidly developing gumma or a meningeal hemorrhage.

Prevention of Insanity.—Statistics seem to show an increase of insanity in all parts of the civilized world, but Dr. Forbes Winslow, of London, the eminent alienist, doubts this. As reported in the *New York Herald.* (*Drugg. Circ.*), he has recently said: "There is not, I think, a greater proportion of insanity to the population than heretofore, but what insanity there is is better understood and more generally under treatment. There are fewer cases of insanity which utterly escape the observation of medical men, and thus fail to be recorded among the statistics of the malady. In the old days, a large number of families, ashamed of the development of insanity among their members, hid the unfortunates, not only from the public, but from science. The dread of the old asylum also played its part in inducing concealment. Then, too, the poor could not pay the prices then charged for treatment of the insane. All that has changed now. Of course, people do not feel less horror over the development of insanity among their relatives, but they realize that it is cruelty and not kindness to isolate them from proper treatment." Dr. Winslow is reported as believing that the occurrence of insanity is largely due to heredi-

tary taint and to intemperance. He holds that those who have once been insane should not be permitted to marry. This particularly is true of women. Certain affections other than insanity proper are likely to develop children of unsound mind, and should be sufficient cause for the prohibition of marriage between parties affected. There are drunkenness, nerve disease and consumption. A slight hereditary taint of insanity on one side may be overlooked, but if there is a slight taint on both sides the danger of a transmission is great. A careful study of the original cause of the taint should be made before the parties are permitted to marry. For instance, if on one side there was but a slight taint of insanity and on the other perfect health for several generations, the union might with safety be permitted. But if on the other hand, the slight insane taint on the one side should be offset by a tendency toward eccentricity or any neurotic symptom, epilepsy, paralysis, consumption or cancer, the union should be absolutely forbidden.

General Paralysis.—The *Charlotte Medical Journal* says of this terrible disease—unknown to our ancestors, but now steadily on the increase: "It is a strange and inexplicable fact that those more frequently attacked by general paralysis are men, and among the most industrious class of men. There is probably no disease of such gravity in which the onset is more insidious. On looking back, when the physical weakness, etc., have become marked and the disease has declared itself, symptoms are remembered lasting for years past, which by themselves seem trivial, and are looked upon as mere accentuation of personal peculiarities, but which, taken together, have the gravest significance. 'Restless, unwonted activity, mental and physical, is of frequent occurrence; a feeling of superabundant energy, for which there appears no adequate relief; often undue irritability, which will not brook control or contradiction; an unreasonable demand upon the time and indulgence of others; waywardness, fickleness, or outbursts of furious passion upon trivial pretexts in those who had previously been more self-controlled and amiable; a growing change in the disposition and character, usually signalized by perversion of some one or more of the moral sentiments—a fact of primary import from the medico-legal point of view.' Such is the description of the symptoms found grouped in most early cases, given some years ago by one of the greatest living authorities. The occurrence of some of these symptoms separately is common in healthy persons, but when several of them occur together, and persist, a close watch should be kept for any more definite signs. These usually occur from the physical side. There is no longer the power of executing finely co-ordinated movements; the right hand has lost its cunning. Tremulousness of the facial muscles of expression becomes prominent, and a similar tremulousness affects the muscles of articulation, so that the speech can scarcely be distinguished from the thick slurring speech of intoxication, for which it is frequently mistaken. The subsequent course of the disease varies remarkably in different cases."

Calf Cramp in Diabetes.—Dr. Unschuld points out (*Am Med. Surg. Bull; Med. Standard*) that diagnosis of diabetes is only made after the disease has lasted for a long time. Years ago Unschuld called attention to three points which frequently mark the course of the disease, namely: (1) chronic catarrhs of the stomach, especially nervous dyspepsia; (2) certain disorders of sensation in the abdomen, partly explained as hysteria, partly as hypochondriasis; and (3) albuminuria. Since then he has had opportunity to see many hundred cases of diabetes, and has found that one of the most frequent symptoms is cramps in the calf of the leg, a symptom to which hitherto no attention has been paid. These cramps usually show themselves in the morning on waking up or during the night, rarely during daytime. If such cramps are found in persons who at the same time complain of weakness and a tired feeling in the morning, the urine should at once be examined for sugar. The cramps seem to be in no connection with the etiological cause of the disease, and are found in all forms of diabetes. They have no influence upon the course of the disease, and usually disappear quickly on the patient getting up, and by massage. The condition is essentially a topoalgia, found in neurasthenia independent of its etiology.

Remarks on the Management of So-Called Dyspepsia.—(J. B. Marvin, M.D.; *Amer. Pract. and News*) The stomach is a hollow organ, lined with mucous membrane and certain glandular structures, acting on the whole as if it were a gland, secreting and emptying into this cavity certain fluids, pepsin, muriatic acid, etc.; then a muscular coat, which by contracting and relaxing accomplishes a thorough mixture of contents with secretion. The stomach also possesses the important power of propelling its contents through the pylorus.

The typical way of obtaining a sample of the contents of the stomach for testing purposes is to give a test meal on an empty stomach. The meal consists of a cup of tea and one or two rolls. In an hour or an hour and a half afterward, a stomach tube is introduced into the stomach. The patient is instructed to squeeze his abdomen and cough, sufficient of the contents being obtained in this way, or a suction pump may be applied to the stomach tube.

The sample is first tested with litmus paper to determine whether it is acid, neutral, or alkaline. If it is not acid it is abnormal. The next thing to inquire into is what acid is present. Normally, muriatic acid alone is present.

To detect muriatic acid a few drops of Gunzburg's reagent (phoroglucin, two parts; vanillin, one part; alcohol, thirty parts), together with a few drops of the sample are heated on a porcelain capsule; if muriatic acid is present, it will strike a beautiful crimson color around the margin. Lactic acid is detected by a mixture of carbolic acid and perchlorid of iron, which gives an amethyst reddish color. Lactic acid, if present, turns it yellow. Starch is detected by means of Lugol's solution, and sugar by means of Fehling's solution.

After the above tests add a little coagulated egg albumen to see how it will digest it. The stomach has to convert the natural albuminoid bodies into assimilable albumen and peptones, and this must be done through something that is contained in muriatic acid or pepsin secretion. Some authorities advise testing some of the filtered contents to see if albuminoids are present; this is done by heating—a precipitate means albumen or syntonin; filter and add nitric acid—a precipitate means propeptone; then, after that has been filtered off, add a small quantity of solution of tannin, which will throw down a precipitate which means peptone. In order to test the motor power of the stomach, give the patient ten grains of salol, either in a capsule or coated pill. Salol is not decomposed in the stomach, but passes on into the intestine and there resolves into salicylic and carbolic acids, and is directly eliminated through the urine. About forty minutes after the administration of the salol, test the urine for carbolic or salicylic acid. If it does not appear before three-quarters of an hour it shows that the stomach does not propel its contents promptly into the duodenum.

The application of these tests is easy, and allows of the separation of a vast number of cases into one or another class, and moreover puts their therapeutics on a rational basis.

The Use of the Catheter After Labor.—Recht (*Jour. de Med. et de Chir. Pratiques: Brit. Med. Jour.*) shows that, on the evidence of repeated observations, micturition is almost always spontaneous. In 6,666 labors under Pinard's care in the course of the last four years, the catheter has been used only twenty times, and in the 1,920 labors last year only three times. Pinard objects very strongly to routine use of the catheter, which, even in skilled hands, often sets up cystitis. The practice in Paris lying-in hospitals is, however, very varied. At the School of Midwives nearly every newly delivered patient has the catheter passed. Maygrier, at La Pitié, delays the use of

that instrument until twelve hours have elapsed after labor without the patient being able to pass water voluntarily. Bar allows a maximum of eighteen hours; Parak and Budin, twenty-four; Tarnier, thirty-six; Champetier de Ribes, forty-eight. Ribemont Dessaigues, at the Hospital Beaujon, objects to the catheter as strongly as Pinard. Boissard finds that not only is there danger of cystitis when the catheter is passed after labor, but the patient is liable to lose the power of voluntary micturition for many days through nervousness.

The Brain in Epilepsy.—Harold Holm has found, in microscopical examination of the brains of three epileptic patients, degenerative processes in the cortical substance, extending to the psychomotor centers, and even to the medulla oblongata and the spinal cord. He endeavored to produce similar changes in the brains of young rabbits by percussion, with an ordinary percussion hammer, on the skull, somewhat in front of the ears.

After each percussion, as is known, epileptic fits occur, continuing for some time, and if daily treated in this way the animal dies in about ten days. A microscopic examination of the brain shows less visible degeneration in the cortical substance than in the portio medullaris, the whole brain, with the exception of the occipital and temporal lobes, being involved. The connecting fibers from the brain to the medulla oblongata and the corpora restiforma are also attacked by the degeneration.—*The Universal Medical Journal.*

How to Find Out If a Case of Gonorrhœa Is Actually Cured.—Dr. Kraft (*La Semaine Médicale*, No. 49, 1894), of Utrecht, Holland, has a very ingenious and at the same time efficacious method of testing whether in a given case of gonorrhœa an actual cure has been obtained. As is known, nothing is more difficult than to be able to say whether a gonorrhœa which has ceased to discharge has really and definitely been cured. The cessation of discharge, the absence of gleet and of agglutination of the lips of the meatus are no proofs that the disease is not present, though latent, and still virulent enough to be transmitted by coitus. In such cases the physician may be placed in an embarrassing position. For example, a patient who has had a gonorrhœa and is about to marry, asks his physician whether he is completely freed from his disease and without danger of contaminating his wife. In such cases Dr. Kraft has the patient drink a quart and a half of beer, while he injects into his urethra a two per cent. solution of sublimate. If he is actually cured no reaction follows; if the contrary is true a discharge will be set up, which sometimes does not appear for forty-eight hours.

Parachlorphenol in the Treatment of Lupus.—Dr. A. Elsenberg, of the Jewish Hospital at Warsaw, has experimented with parachlorphenol in the treatment of lupus with very encouraging results. The action of this remedy on the diseased tissues resembles that of tuberculin, but is free from the dangers attending the employment of the latter. Two different preparations are made use of: One, a pure crystallized parachlorphenol; the other, a liquid containing a certain quantity of orthochlorphenol. The affected parts are first carefully washed, either with alcohol and ether in succession, or with a strong watery solution of carbonate of potash, then painted firmly and repeatedly with a piece of wadding dipped in parachlorphenol, after which the following ointment is applied:

Parachlorphenol Lanolin Vaseline Starch powder	.....aa 10 grammes.
Misce.	

The ointment, to which a little carbonate of potash may be added to dissolve the parachlorphenol, is allowed to remain for ten or twelve hours. It is then carefully removed by means of wadding, and replaced by an ointment of salicylic acid or iodoform. In two days the parachlorphenol is reapplied as before, and so on.

This procedure is painful, but less so than the application of pyrogallic acid. It gives rise to more or less swelling of the parts, followed by destruction of the morbid foci. No constitutional disturbance is produced. It is notable, that in proportion as the lupus tissue is destroyed by the treatment, the local action of the parachlorphenol becomes less powerful.

In conclusion, Dr. Elsenberg is convinced that the effects of parachlorphenol are to cicatrize the ulcers of lupus and destroy its nodules; that it prevents new morbid foci from developing, and hence is decidedly superior to all other agents previously recommended in this disease—such as pyrogallic acid, zinc chloride, hydronaphtoquinone, and solution of permanganate of potash, 1–10.

Papain as a Tape Worm Remover.—Dr. Roberts Bartholow reports in the *Medical News* a case in which, after failure of the usual remedies for tape worm, a parasite twenty-five feet in length became dislodged and was passed after the use of papain, in ten grain doses, three times a day after meals. The worm had not apparently been affected by the digestive power of the drug, the result being achieved by some other force.

The Practical Value of Walcher's Hanging Position in Obstetrical Operations.—Wehle (*Arch. F. Gynecologie*, H. 2, Bd. xlv., 1893) thinks Walcher's discovery that the conjugate of a narrow pelvis has no constant dimensions, but is altered by the position of the patient, has not received sufficient attention. Walcher found that in both normal and pathological female pelves, the C. vera and C. diagonalis have a mobility of more than half a centimeter. The conjugate diameters were increased by the hanging position, *i. e.*, the patient is placed in the dorsal position on the examining table and the legs are allowed to hang downwards and outwards as far as possible; the conjugate diameters were on the contrary diminished in the ordinary position for operating, *i. e.*, dorsal position with the legs flexed on the abdomen. The explanation is the rotation of the sacrum on its transverse axis, the promontory sinking downwards and backwards. This mobility of the sacrum is much greater in pregnancy than at other times. This gain in space at the pelvic brim is used to advantage by employing the position in operations till the presenting part has entered the pelvis, and Leopold recommends it for symphyseotomy. It is now shown that the dorsal position, with the knees flexed on the abdomen, is a hindrance rather than a help in operating above the pelvic brim. Several cases are recorded where forced tractions were of no avail in the old position, but by placing the patient in the new position delivery was readily accomplished. Wehle reports from the Dresden Clinic twenty-five cases of version in contracted pelvis, in which this position was employed with better results than are obtained usually in such cases.

Sawdust as a Surgical Dressing.—A. Neve, surgeon to the Kashmir Mission Hospital, India, strongly recommends the use of sawdust pads as a staple surgical dressing material. The sawdust is packed in muslin bags, and the pads are readily rendered aseptic or antiseptic. In practice they are impregnated the day before use with a 1 in 2,000 solution of mercuric zinc cyanide, or sterilized in a Cathcart's or Schimmelbusch's oven.

OBITUARY.

Dr. Edward J. Whitney died August 7th, at his late home, 100 Lafayette avenue, Brooklyn, of chronic gastritis, at the age of fifty-six. Dr. Whitney served as surgeon in the civil war, and on retiring from the army established himself as a physician in Brooklyn, where he met with brilliant success in his profession. Dr. Whitney was prominent in charitable work, and was one of the founders of the Cumberland Street Homœopathic Hospital.

Dr. E. D. Jones died at his residence at Albany, Aug. 16th, at the age of seventy-seven years. Dr. Jones had been in active practice in Albany since 1840 until a few years ago, when he retired from professional life.

MISCELLANY.

—In the German population of 50,000,000 the females outnumber the males by 1,000,000.

—It is reported the Governor refused to sign a charter for the Metropolitan Post Graduate School of Medicine.

—The census of 1890 shows that if the extra property of this country was equally divided each person would have $1,035.

—The Legislature of the State of Rhode Island has recently passed an act for the regulation of the practice of medicine.

—Prince Bismarck's physician, Dr. Schwengen, has received from the German Empire the title of Medical Privy Councellor.

—There are at present ninety-eight members of the medical profession in the French Legislature, sixty-one of whom are deputies and thirty-seven senators.

—Professor Bunsen, the famous chemist, celebrated his eighty-fifth birthday on March 31st. He gave up teaching five years ago, but still lives at Heidelberg, in excellent health.

—Dr. George B. Fowler, who succeeded Dr. Edson in the New York City Health Board, has been appointed Commissioner for the City of New York on the State Board of Health.

In our notice of the August Number *Medical and Surgical Reporter*, our typo made us say the Seventh volume instead of the *Seventy-third*, which is the fact. The journal was established in 1853.

—Wm. F. Jinks' memorial prize of five hundred dollars has been awarded to A. A. Brothers, M. D., 162 Madison street, New York, for the best essay on Infant Mortality During Labor and its Prevention.

—No case of typhoid fever has ever been observed among the Chinese in California. This immunity is undoubtedly owing to their exclusive use of boiled water, in the form of tea, for drinking purposes.

—According to Dr. A. Campbell White, any remedy which will prolong the life of the patient with diphtheria beyond the thirteenth day, has carried him beyond the danger of death and may be called a specific.

—The *Portland* (*Me.*) *Press* records the case of a gentleman who, instead of getting a doctor to remove a needle imbedded in the fle h, resorted to the electric light station, and had it painlessly drawn out by a dynamo magnet.

—In France medical men find politics very attractive. There are thirty-seven medical men in the French senate and fifty-eight in the Chamber of Deputies. The new British Parliament contains ten members of the medical profession.

—Cycling causes great rapidity of the heart's action, according to Sir B. W. Richardson. He says a rider while on the wheel invariably has a rapid pulse, not unfrequently from one hundred and fifty to two hundred per minute.

—A St. Petersburg medical journal is responsible for the report of a Russian girl, aged thirteen, who weighs 280 pounds. She is six feet eight inches in height. She measures forty inches around the bust and nearly thirty around the thigh.

—We hope that Dr. Max Simon Nordau will succeed better in the novel upon which he is now engaged, and the play which is speedily to follow, than in his work on "Degeneration," a mischievous work which never ought to have been written.

—A French gentleman, M. Guzman, has left 50,000 francs to the *Assistance Publique*, the Paris municipal charity department, to defray the cost of musical entertainments to be given to the sick poor in the hospitals and asylums under its control.

—The fee for a professional visit in Nottingham, England, is one shilling, according to a correspondent of the MEDICAL TIMES. Even then the medical man often has to take it out in trade with the small shopkeepers, who refuse to pay such exorbitant charges in cash.

—The International Congress of Thalassotherapy met at Boulogne in July last, and is to meet again August 27th to the 31st. The two principal questions which are to be discussed are: (1) Pulmonary consumption on the sea borders, and (2) the technique of sea bathing for disease.

—Dr. Annetta Kratz states (*Med. World*) that in her obstetric practice the scrotum of new-born male infants of African descent is always black, otherwise they are just like white babies. She wants to know how to distinguish the new-born female children of colored people from the Caucasian.

—According to Dr. W. F. Drury, First Asst. Physician Central State Hospital, Petersburg, Va., in that institution, where only insane negroes are treated, no attempt in any manner whatever at self-destruction has ever been made. This he considers a rather remarkable and interesting fact.

—Wun Lung was his name, and he was a heathen Chinee. He thought he wanted his life insured, but the medical examiner, who was a philologist as well as a doctor, wouldn't accept him until the origin of his family name was fully explained, and explained in English. The doctor said he was not going to be criticised for passing any one-lung applicants in his company.

—Dr. George F. Shrady, in the *Forum*, says that Dimsdale, a prominent physician of London, was called to vaccinate the empress Catherine II., of Russia, in 1762. The *Cincinnati Medical Journal* wants to know how this can be when Jenner did not confirm his discovery in regard to the protective value of vaccination until 1796. Answer: Dr. Shrady, no doubt, meant to write "inocculate" instead of "vaccinate."

—Abnormal urines often rotate the plane of polarization, sometimes to the right, sometimes to the left. According to Haas (*Apoth. Zeit.*), the following substances in the urine cause left-handed rotation: Glycuronic acid, phenyl and indoxyl-glycuronic acids, leucin, tyrosin, albumin, peptone, hemialbumoses, cystin, cholesterin, aspartic acid, levulose, pseudo-butyric acid. Dextrose is the chief and almost only substance responsible for dextro-rotation.

—Max Gordon (*D. Med. Wochenschr.*, 1894; No. 12-272) relates the histories of two cases of carbonic oxide poisoning, and one case of poisoning by illuminating gas, in which intravenous infusions of table salt were made and ultimate recovery ensued, and asks in what way we can expect to benefit these cases by these infusions? The question why carbonic oxide acts toxically on the organism is answered differently by different authors. No matter which theory is correct, a remedy which is directed against all these must be the right one to use, and such a remedy, which at the same time prevents suffocation, restores the circulation, and protects the nervous centers, is found in the depletory infusion of a physiological solution of table salt. This is true, not only in carbonic oxide poisoning, but also in poisoning by illuminating gas. Infusions of table salt have a great advantage over transfusions of blood, in that they can be carried out with great ease at any time, and without any complicated apparatus. In the cases whose histories are given, between 200 and 300 c. cm. (7 to 10 oz.) of blood were removed from the left median vein, and between 300 and 400 c. cm. (10 to 13 ozs.) of a 0.6 per cent. solution of table salt, at blood temperature, were slowly injected under strict antiseptic precautions. Immediately after injection the pulse became fuller and more regular, although the stertorous breathing, which had been present in all cases, improved only gradually. All three cases recovered completely.